BRITAIN'S BEST-SELLING MAGAZINE FOR AMIGA OWNERS

BIGGEST EVER!

AMIGA FORMAT

ISSUE 12 ■ JULY 1990 ■ £2.95

tape...

NO TAPE?
DEMAND ONE FROM YOUR NEWSAGENT NOW!

disk...

NO COVERDISK?
DEMAND ONE FROM YOUR NEWSAGENT NOW!

music

SMASH the sound barrier with our complete guide to starting out in music

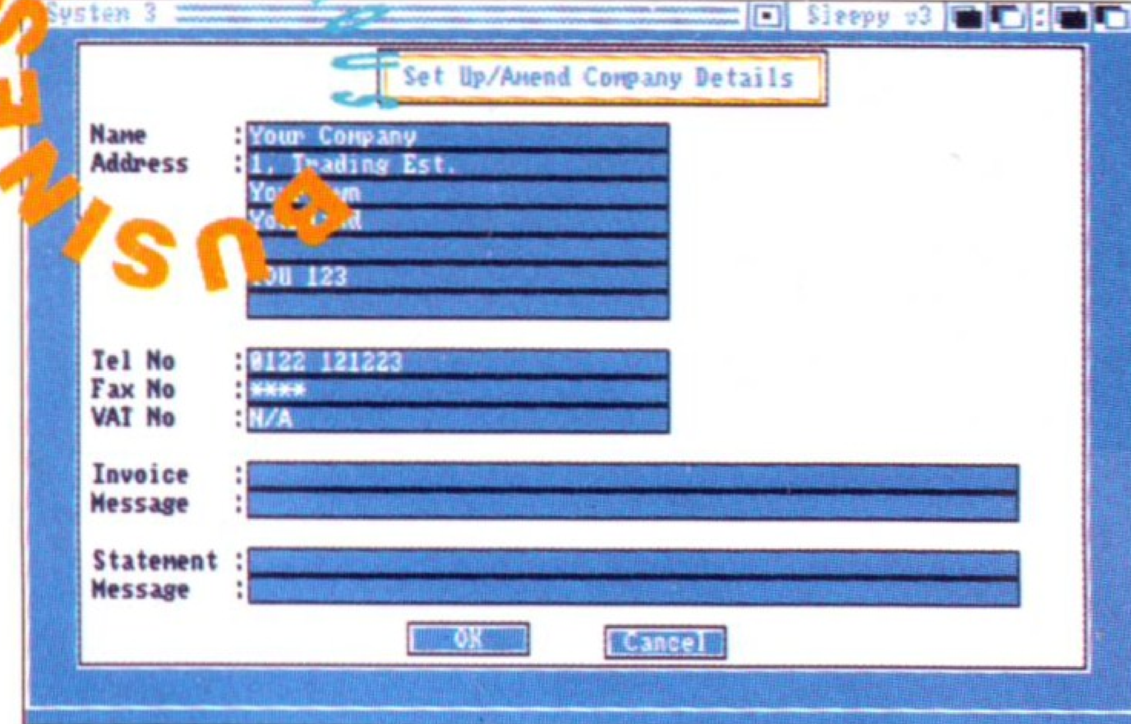
football

Get a KICK out of our World Cup special









AMIGA FORMAT twelve JULY 1990

EDITOR Bob Wade **PRODUCTION EDITOR** Damien Noonan **REVIEWS EDITOR** Andy Smith **STAFF WRITER** Maff Evans **ART EDITOR** Angela Neal **DESIGN ASSISTANT** Marcus Dyson **DISK EDITOR** Richard Monteiro **CONTRIBUTING EDITORS** Jon Bates (Music), Brian Larkman (Graphics) **CONTRIBUTORS** Phil South, Mark Smiddy, Dave Jones, Paul Andreas Overaa, Adrian A Chrome, Colin Campbell, Tim Smith, Steve Jarratt, Trenton Webb **ADVERTISING MANAGER** Jennie Evans **AD SALES EXECUTIVE** Paul Steer **AD PRODUCTION** Fiona Milne **AD SERVICES** James Leach **PUBLISHER** Greg Ingham **ASSISTANT PUBLISHER** Jane Richardson.

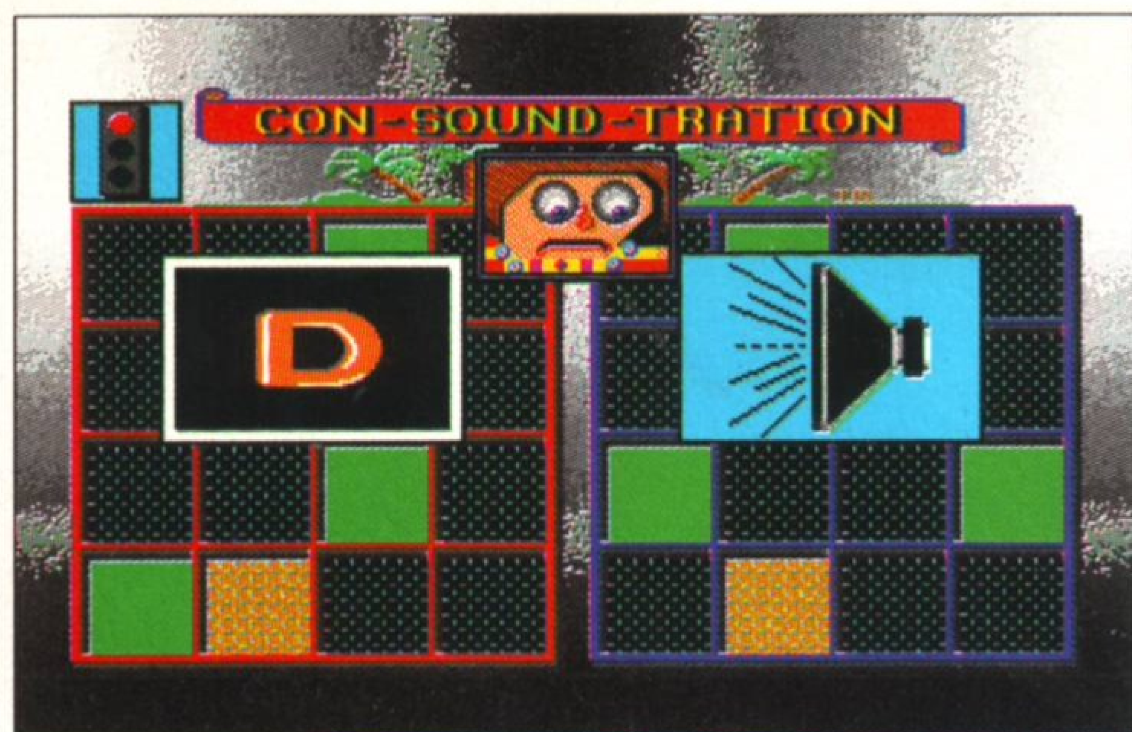
PHOTOGRAPHY Ashton James, Bradford-upon-Avon COLOUR ORIGINATORS Swift Graphics Ltd, Southampton, PRINTERS Riverside Press Ltd, St Ives PLC, Gillingham DISTRIBUTORS SM Distribution, 6 Leigham Court Road, Streatham, London SW16.

Future PUBLISHING

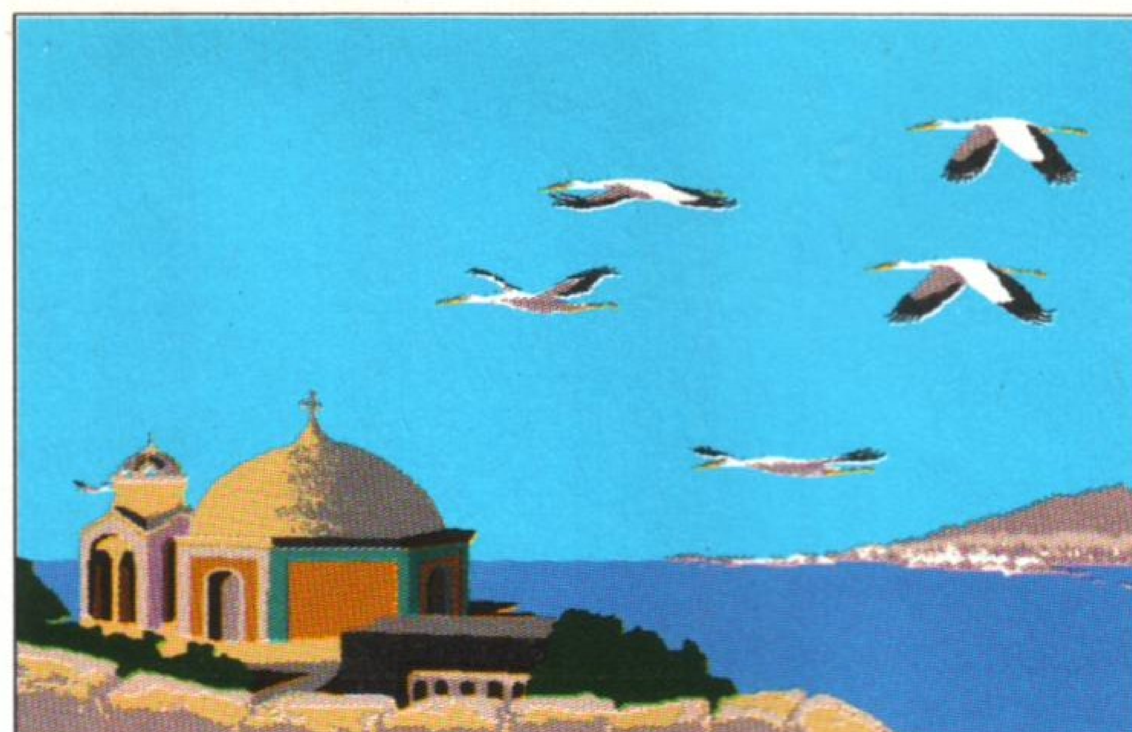
EDITORIAL/ADVERTISING
30 Monmouth Street, Bath, BA1 2AP. ☎ 0225 442244 FAX: 0225 446019

SUBSCRIPTIONS/MAIL ORDER
The Old Barn, Somerton, Somerset TA11 7PY ☎ 0458 74011

COVERDISK HOTLINE
☎ 0225 765086 between 2pm and 6pm weekdays only



EDUCATION 131



GRAPHICS 31

SPECIALS

REVIEWS

REGULARS

SCREENPLAY

FORMAT GOLD

REVIEWED

music

A day in the life of a tune. Follow the construction of a piece of music, listen to the tape as you go, and learn how easy it can be...

FOR THEIR HELP IN THE MAKING OF THE MUSIC FEATURE, OUR THANKS GO TO: DUCK SON AND PINKER, BATH (MUSICAL INSTRUMENTS), MIKE AT MOLES STUDIO, BATH (DAT RECORDER), YAMAHA UK (INSTRUMENTS AND PICTURES).

Disk Extra 119

DAN DARE III

PLAYABLE DEMO OF SPACE SUPERHEROICS FROM VIRGIN

GAMEBUSTERS: Cheats for loads of the latest games ■ **XTRABENCH:** Make lots of little Workbenches ■ **ROCKET:** Intercontinental ballistic hack

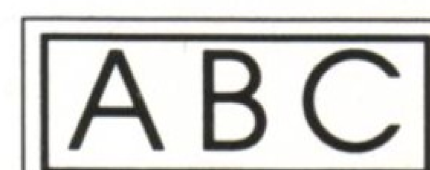
QUARTET

FULL USEABLE DEMO OF MICRODEAL'S NEW MUSIC-MAKER

GONZO: Quartet tune for our Music Special ■ **INTUITRACKER:** Plays Soundtracker music file ■ **FORMATUNE:** MIDI files for our Music Special

SUBSCRIBE NOW

If you read *Amiga Format* every month, why not make sure of your copy by getting it delivered straight to your door? Save hassle, save money and get a free game, too!
See Page 91 for details!



Member of the Audit Bureau of Circulations
40,371 Jul-Dec 1989

688 ATTACK SUB







- New standards of realism, 3D graphics and excitement
- Command a billion dollar US Los Angeles class submarine, or a top secret Soviet Alfa in some of the World's most notorious hot-spots
- 10 different scenarios with infinite play possibilities

For a FREE brochure, please write to the below address, stating machine type (Amiga or IBM only) and the magazine in which you saw this ad. The first 100 applicants will also receive an exciting 688 mobile!

AMIGA £24.99 IBM £29.99

IBM & AMIGA only.

Dept. 688,
Electronic Arts,
11/49 Station Road, Langley, Nr. Slough,
Berks. SL3 8YN.
Tel: 0753 49442

Screenshots represent IBM version, we think the Amiga version looks even better!

ELECTRONIC ARTS®

A new wave of creativity software arrives from the States

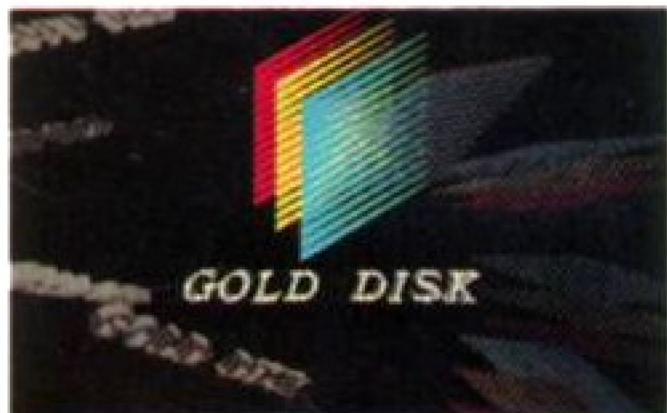
The American Revolution

MULTIMEDIA – A REALITY?

Fine, so Commodore have released the new all-powerful A3000 (see News, last issue), which is endowed with vast processing power and pioneers the new easy-to-use wimp-based Workbench Version 2. But if this is – as Commodore claim – the ultimate multimedia machine, where's the multimedia software?

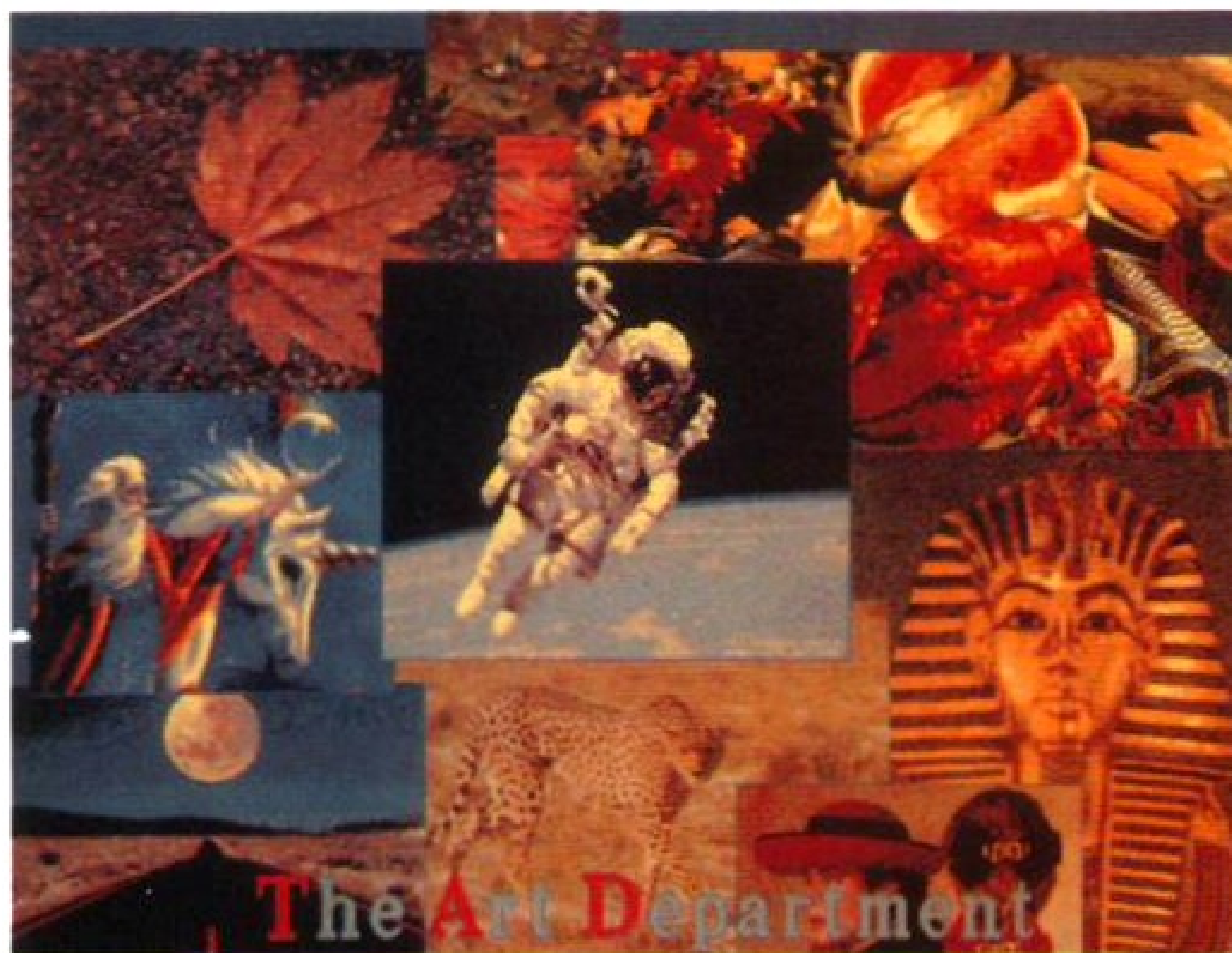
Just launched in the States and expected to find its way to these shores soon is a brand new multimedia authoring system from Gold Disk. And you don't need an A3000 to use it, though A500 owners will be denied the pleasure. *Showmaker* organises sequences of video, graphics and sound into massive multimedia productions limited only by storage space, not by the Amiga's memory. With control over video sources, genlocks, computer animation and MIDI music systems as well as internal titling, storyboard and preview functions, the program offers an all-in-one way of creating complete shows which can be run in real time.





ABOVE: Gold Disk have launched Showmaker, a new multimedia presentation system.

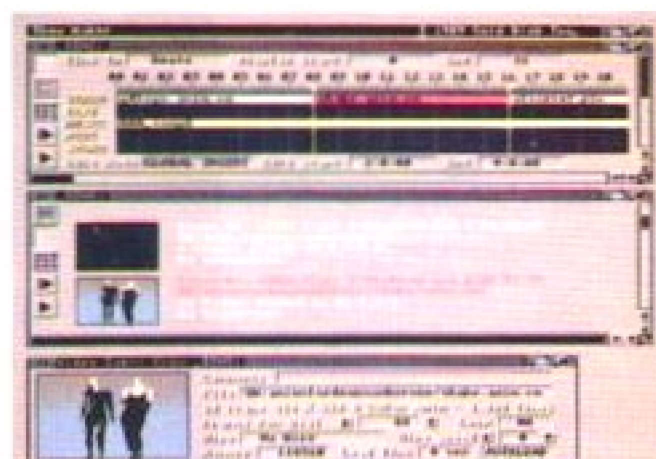
The possibilities are endless for anyone who's ever dreamt of making their own television programs, as well as for more serious uses in creating commercial presentations or for public information. *Showmaker* should reach these shores around July or August and will be available from HB Marketing at a price of about £400.



JOBS IN THE ART DEPT

If all this talk of powerful structured graphics and DTP has given you aspirations to publish high-quality full-colour glossy magazines using your Amiga – and it is easily possible to do a magazine like this on your machine – then a new product from ASDG in the States may be of interest.

The Art Department is an image-processing system that can take pictures of the very highest quality and produce magazine-quality separations for use in DTP. It includes a wealth of tools for colouring, enhancing and sizing images far too vast to mention here and comes with not one, but two loader modules that allow input from 21-bit DigiView and any kind of IFF – EHB, HAM, AHAM, SHAM, Dynamic HAM, ARES and Dynamic Hi-Res formats.



And, because of its 24-bit input capabilities, *The Art Department* may also prove a boon to graphics and video artists using 3D modelling software – it is claimed to be able convert an image to displayable form quicker than any rendering system currently available. Price in the US is $89.95 and though no UK distributor is currently known to us, more information can be gleaned from ASDG on (US) 0608 273 6585.

DRAWING THE CROWDS

Considerable attention will no doubt be attracted by the imminent arrival of Gold Disk's updated structured drawing package, *Professional Draw 2*. The new version offers a five-fold speed increase over the old, as well as being able to write text along curves and display 1,000 apparent colours thanks to a colour dithering system.



The strength of *ProDraw* is that it is vector-based, so images can be blown up to any size without losing sharpness or showing jagged edges. Capping this off nicely, a new Autotrace feature in Version 2 will make it possible to convert bit-mapped images into a vector-defined object. *ProDraw 2* is out soon from HB Marketing at a price in the £300 region – expect a review in next month's *AF*.

Apart from its own two fonts, *ProDraw* will also be able to use the new *Outline Fonts* from Gold Disk. This is a collection of over thirty-five professional-quality Compugraphic fonts which – again because they are structured – can be blown up to any size and will print at near-laser quality on any graphics printer. *Outline Fonts* won't come cheap, however – it should cost something like £200.

GOLDEN OPPORTUNITY

A special offer from Gold Disk and HB Marketing will allow anyone who owns the original Amiga desktop publishing package, *Pagesetter*, to upgrade to the new version *Pagesetter 2* for only £39.95. *Pagesetter* is an excellent basic DTP package aimed at users who aren't quite ready for the power of Gold Disk's own higher-priced *Professional Page*.

The new version, reviewed in *Amiga Format* Issue 8, is a total rewrite that pinches much of the sophisticated workings from its big brother, ending up as an extremely strong product.

DON'T MISS OUT ON YOUR MAGAZINE!



You may already have noticed, as you pick this hefty tome up from the shelves in the newsagent's and wiegh it in your hands, that *Amiga Format* is a big magazine. And we're getting bigger all the time.

Being big, though, doesn't just mean producing a mag packed with 196 pages of action. The magazine is also being bought by more and more people all the time. Already, many people find that getting hold of a copy is difficult – and we're doing our best to help by printing as many copies as we possibly can.

But the best way to make quite sure you don't miss out on your copy every month is simply to subscribe. Just think – *Amiga Format* will drop on your doormat every month, regular as clockwork, without you having to brave the rain outside. And you will very often get the magazine before it's even available in the shops!

If you subscribe now, you can have a completely free full-priced game as well! Just turn to Page 91 of this issue to find out all about it. You know it makes sense!

BBC EMULATOR RECEIVES TRANSFER HELP

Anyone who owns and uses the Commodore *BBC Emulator* will know that it can be a pain copying disks over from BBC format to the Amiga. This is why Track have released *Transfer*, a combination of a transfer program software and a BBC-to-Amiga cable that offers everything you need to copy programs, machine code and data files across to the Amiga. *Transfer* costs £14.99 and is available from Track on 0332 41817.

MOUSE SQUEAKS

You may already know that Simpson Electronics of Derby can convert your mouse to microswitching. What you may not know is whether or not your mouse needs converting. Paul Simpson has very kindly written to us explaining that if your mouse has a slip-pad at each corner – on the bottom, that is! – then it is an old type, and could well use having microswitches fitted. If, on the other hand, it has pads at each corner at one end, and a long strip at the other, then it was factory-fitted with microswitches, so you should be OK – though they may be worn and need renewing. Simpson are now doing a conversion kit which you can use to convert your mouse for yourself. The kit costs £10.00 including full instructions and recorded delivery. Simpson are on 0332 760353

PUMP UP THE JAM

If these guys are right, the classy world of the music video is going to be well within reach of Joe Public in the very near future.

Hardwire is a collaborative project involving Coldcut DJs Matt Black and Jonathon More – the first UK DJs to make a cut-up record, way back in 1987, and since responsible for hits by such acts as Lisa Stansfield, Yazz, James Brown and Mark E Smith – and computer artists Miles Visman and Robert Pepperell.

These guys firmly believe that just as home computers undercut the expensive hardware when digtal music technology first appeared – many people now use a 16-bit computer rather than a hugely costly dedicated sampler or sequencer – the future for video lies in the kids doing it for themselves. The Amiga can become a real tool for cheap, but still wickedly creative, music video.

Taking the pioneering first steps, Hardwire have produced video sequences to accompany all the tracks on Coldcut's forthcoming new album 'Some Like It Cold'. These mix live video footage with such computer trickery as 3D ray-traced models, fractals and frame-grabbed images – all quite familiar to our sophisticated reader, of course. The whole project cost only a fraction of what it would have with conventional video techniques, and has to be a good thing for the machine we all know and love, as well as for the money-mad music industry. Look out for the video soon!



MOUSE IN THE HOUSE

Talk about Tom and Jerry! The connection in may people's minds between the word 'mouse' and images of those lovable cartoon rogues has just been made even more concrete by Britain's most prolific producer of mouse products, Contriver of Buckingham. The reason for this is a special deal in which Contriver's new mice, the 820 and 830, are to be bundled with a copy of Fantavision, the art and animation package. These two new mice are similar in workings but look quite different. Both have a resolution of 200 dpi, which makes them very accurate to control, and come complete with free mouse mat and storage pocket.

Both mice come at a price of £29.99 without Fantavision, but can be bought in the bundle with the animating art package for a mere £54.99. More details on this offer can be obtained from Contriver on 0280 822805.



No, it's not time for another Tom and Jerry game for the Amiga. Contriver's new mice are to be bundled with *Fantavision*.

MAFF'S GIRLIE BEATS THE WORLD!



The scenario is this – Electronic Arts set up a competition for all the most skilled games-players and reviewers from Britain's leading computer games magazines. All will compete in a tournament based around EA's new futuristic hover-hockey game *Projectyle*.

Confident of victory, *Amiga Format* sends along ace player Maff Evans – and Maff decides to drag his girlfriend Clare along with him. When the dynamic duo arrive, they find some reviewers from other mags have dropped out, so Clare is persuaded to compete.

And Clare wins. Not just one game, but the whole competition. She beats leading reviewers, famous names from those computer games mags you read. One in the eye for the big boys, I think! And it goes to show that even people who hang out with the *Amiga Format* team are world-beaters!

COMPETITION CORNER

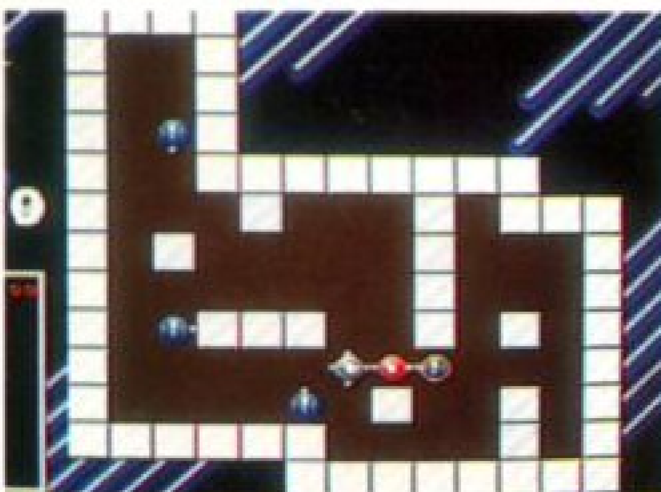
PD LIBRARY OFFERS SHARED PROfiTS AND FREE DISKS!

Premier PD, Merseyside's flourishing PD library, have announced a competition to find the best piece of new PD software. The rules are simple. All you have to do is write a PD program of any kind – music, animation, utility, whatever – and send it to Premier. The author of the best piece of original work submitted by the deadline of October 1st will receive 50 free PD disks of his or her choice. Only condition is that you must be a member of the PD library, which will set you back a measly quid.

Premier have also announced a scheme whereby if they make any profit, it will be shared back amongst members in the form of free PD software. The exact amount will depend on how much the member has spent over the year – members will be told how much they can claim back and will then have a free choice of what they want to receive. A glowing example of true PD ethics! Write to Premier at 15 Croxteth Drive, Rainford, Merseyside, WA11 8DX for details of membership or of the competition.

CHEMISTRY TEACHERS, APPLY HERE!

It may already be too late, but if your chemistry teacher is a whizz at computer games as well as at Avogadro's Constant, you could both win. The first Chemy teacher to complete 20 levels of *Atomix*, the molecule-building game from Thalion/Grandslam, will win an Amiga for his school and £100 for the pupil who nominates him. The form is simple – all you have to do is send a letter on school headed notepaper signed by the headmaster or deputy head of the school, confirming your teacher's achievement. Write to Grandslam at 56 Leslie Park Rd, Croydon CR0 6TP – the first letter received wins the prize. *Atomix* is out now, priced £19.99.



TENNIS CHALLENGE

Never mind Wimbledon – if tennis is your game, then a prize play-off of UbiSoft's *Pro Tennis Tour* at the Virgin's Marble Arch Megastore on Oxford Street is for you. The contest takes place on June 30th, starting at opening time and ending when the store closes. You can win tennis gear, copies of the game, T-shirts and posters!



IT BITES!

Dave and Peter, those nice boys at Intrinsic Technology, are suffering under the strain of prolonged curry-eating. Their company produces a range of carefully-targeted music products: MixIT, a handy four-into-one passive mixer price £35; CableIT, a complete range of audio and MIDI cables from £3; and Test IT, a MIDI testing utility that comes complete with cables for only £10. Get more details on 081 761 0178.

Anyway, Dave and Pete are dying to give away a £50 voucher for their products to the first 'correct' entry drawn out of the hat. Their questions are:

1. What does IT in MixIT stand for?
2. How many Indian meals have Dave and Pete had since they formed the company?
3. What would you consider the most useful musical accessory that you do NOT own?

Send your entries to Dept WinIT (Amiga Format), Intrinsic Technology Limited, 4 Auckland Court, London SE27 9PE.

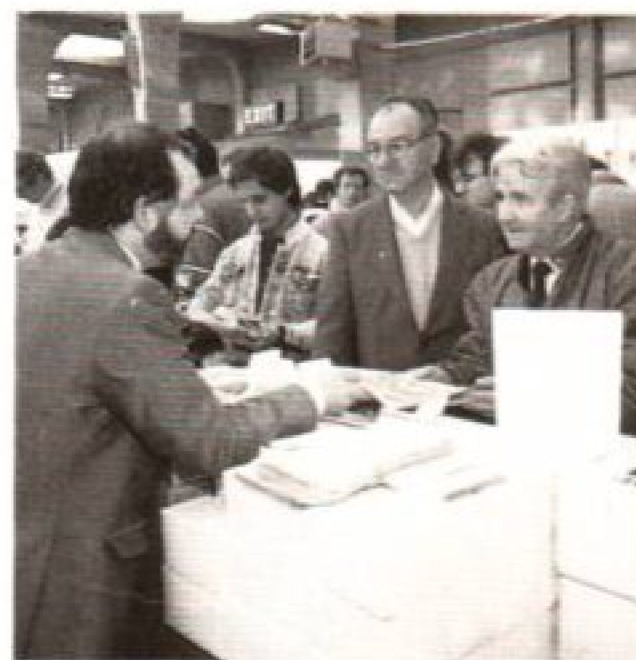
16-bit Computer Fair is looking good

Last year saw the arrival of a brand new computer show, the 16-bit Computer Fair, which hoped to provide an interesting and enjoyable day out for your modern, sophisticated computer user. It was a great success, so organisers Westminster are promising us an even bigger and better fair this time around.

Already, with a final line-up far from confirmed, the show promises 120 exhibitors with major software houses, the likes of US Gold, expected to be making an appearance. The main event takes place over three days, from Friday June 29th to Sunday July 1st, with a special tradonly day on Thursday June 28th.

Over 22,000 members of the public are expected to attend over the weekend. Westminster point out that the show's unusual venue, the Royal Horticultural Halls in Victoria, London, is easy to reach, which certainly takes a lot of hassle out of what can be a tiring day of enjoying yourself!

As a special offer to readers of Amiga Format, Westminster have provided the ticket on the left-hand side of this page which you can cut out and take along to receive £1 off the entry fee. Have a good day out!



USE THIS TICKET AND

SAVE £1

ON ENTRY TO THE NEXT

16 BIT COMPUTER FAIR

SUMMER EVENT

■ ■ ■

ON FRIDAY, SATURDAY & SUNDAY
JUNE 29th/30th & JULY 1st
(THURSDAY JUNE 28th BY INVITATION ONLY)

* AT THE ROYAL HORTICULTURAL HALLS
GREYCOAT ST, VICTORIA, LONDON *

(NEAREST TUBE/MAINLINE VICTORIA)

OPENING TIMES 10-6 EACH DAY (Closes 4pm Sunday)

ORGANISED BY WESTMINSTER EXHIBITIONS 081-549-3444





Who do you think you are?

Issue 7 seems like a long time ago, but so many of you responded to our questionnaire (a big thank you to all of you) that it's taken a while to get the results together. So, here come the selected highlights that reveal who (or what) an Amiga owner is.

AGE

An impressive spread here, all the way from the under 16s to the 35-44 year-olds. 22% are under 16, 31% are 16-24, 18% are 25-34 and 21% are 35-44.

It's nice to see that there's also a further 8% who are over 45.

SALARY

Brace yourselves for a shock – 62% of you are in full time employment and 34% earn over £10,000 per year. Amongst that 34%, there are 9% earning £15,000-20,000 and 6% actually receive over £20,000 – no wonder the Amiga market is doing so well.

HARDWARE OWNERSHIP AND INTENTIONS TO BUY

Some staggering figures on hardware ownership and intentions to buy – 57% have a printer and another 27% intend to buy one, 56% have a second drive and 30% intend getting one. The figures for memory upgrades – 50% own, 38% intend to buy – and monitors – 48% own, 17% intend – are equally impressive.

SOFTWARE OWNERSHIP AND INTENTIONS TO BUY

Just about everybody, 94%, has games and a whopping 80% have an art program. Good figures are also recorded for word processors – 58%, music – 45%, database – 36%, spreadsheet – 33%, assembler – 20% and a programming language – 20%.

Intentions to buy vary quite a bit and are much more evenly spread between all types of software. Top of the pile again is games but there's a close contest between music, DTP, programming languages, sound sampler and art for the next few places.

LARGEST MACHINE USE

51% for games, 35% for creativity and 14% for business – clearly everybody likes having fun in one form or another. But remember this is what people *mainly* do – even those 51% of gamesplayers do a lot more besides.

SECTION RATINGS

The most popular section of the mag came as no surprise; it's the disk, averaging over 8 out of 10. At over 7.5 come hardware reviews, serious reviews Workbench and Graphics, while at over 7 are Letters, News, PD Update, Screenplay and Previews.

The least popular section? Guru's Meditations. Having said that, it still managed to get an average mark over 5 which isn't that bad. By the time of the next questionnaire we expect to get that down to about 3.

NEW REGULAR Of the list of possible new regular sections there were two clear favourites – DIY hardware projects and an assembly language tutorial. Both of these will now happen. They may not be monthly and they won't appear for a couple of months, but we are getting them sorted out.

OTHER HIGHLIGHTS

- Only 4% of you are female – which is not too good.
- No A1000 owners at all replied to the survey.
- The favourite cover out of the first seven issues was Art Attack on Issue 5.
- The least popular cover was the first one.
- 65% had read all seven issues.
- 68% used PD libraries either 'often' or 'occasionally'.

Fascinating stuff, isn't it? From now on we will also be getting even more feedback on a monthly basis to find out what you want. Every month we are sending out a number of Freepost reply cards asking for your opinions. If you are lucky enough to get one of these cards with the mag, please fill it in, because that way we can get instant feedback on what you do or don't like. It's your magazine.















COMING ATTRACTIONS

You know the score by now – this is where you find all that's new, rocking and raunchy.

1 Flood
Since the storming success of *Populous,* we've all been holding our breath in anticipation of the next game from programmers Bullfrog, via Electronic Arts. And this is it! *Flood* is in a different vein, an arcade game in which our hero, Quiffy, must escape 36 levels of underground caverns full of psychotic baddie creatures and rapidly filling with water. Expect good, clean, accessible arcade platform fun with heaps of atmospheric sound effects and cartoon graphics.

2 Scavenger
Hewson hit the high spots this month with three new releases. First up is *Scavenger,* a horizontal scroller in which the player must travel through time zones gathering unwanted artifacts and returning them to their rightful era. Only problem is that the inhabitants and creatures of the time zones may tend to get in the way...

3 Nebulus 2
Follow-up to the smash-hit platform game in which Pogo made his way up towers. Again from Hewson, this newie gives our big-schnozzed hero a helicopter and heaps of extra goodies with which to make his way through 16 levels of towers, slides, ropes and teleports. Confidently expected to be as good as, if not better than, the two-year-old original.

4 Future Basketball
The Hewson cybernoids are at it again, playing out present-day sports in a violent and dangerous form to please blood-thirsty future crowds. This is basically a basketball sim with a full management system, six skill levels and two league divisions to win. Only difference is, full bodily contact and extremely large weapons are encouraged...

5 Wonderland
With a programming team like Magnetic Scrolls – dedicated for long years to the highest standards of adventuring – an all-new adventure environment and over 100 high-quality illustrations, this could be one of the bset adventure games ever to hit your screen. And that's not even considering the brilliance of the Alice books on which it is based. Challenging puzzles and gripping gameplay should convey the atmosphere of the original story in an excellent way. Expected soon, after two years of development, from Virgin Mastertronic.

6 Saint Dragon
One of the best coin-ops of recent years, this should really hit the high spots as a conversion. Hop in your dragon-







head fighter and blast your way through six levels of stunning graphics, guarding the ship with your armoured tail. Converted by Random Access, the boys behind *Silkworm*, this Sales Curve release on the Storm label could bring new life to the shoot-em-up scene.

7 Rod-land

We've had *New Zealand Story*, we've had *Rainbow Islands* – both excellent games. Hands up who wants more cutesy platform action! All of you? Well, look out for another Storm coin-op conversion, this time of the Jaleco game *Rod-land*.

This is cute with a hard edge, as heroes Tam and Rit, a pair of fairies with Spock-like pointy ears, stomp around wielding their magic rods and collecting flowers. The fairies murder innocent seals, sharks and bunny wabbits by stunning them with their rods, then bashing them on the floor. All the usual 'collect the bitties for extra lives' type of intricacy is here.

8 Big Run

Yes, it's the big run to the sun in the third this month from Storm. Jump behind the wheel of a super-tough rally car and blast through the Sahara in the desert stages of the Paris-Dakar (What? Again!) On the way you'll find the scenery takes its toll, but your car is tough enough to survive – it's just those precious seconds that are wasted as you battle against a tough time limit. Can you wait till next year for this?

9 Starblade

Palace offer us more French genius in the form of *Starblade*, an epic space-opera set in the year 3001. Flying in Starblade, the most advanced ship in the galaxy, you must track down the diskettes scattered on various planets which contain details of the secret location of the mutant queen, Genolyn, of the insect aliens. If Genolyn breeds, her mutant offspring will finally wipe out humanity. Can you save us?

LICENSED TO PROGRAM...

A quick run-down of the all-action licences that you can expect to see spawning yer actual games in the near future...

1 Q8 Team Ford Rally

Thalamus have earned the right to produce a rally sim based around the exploits of the quicker than quick Q8 boys in their Team Ford Sierra RS Cosworth 4x4 Turbo rally mean machines. Three stages of road and forest driving should ensue, with the odd excursion into the scenery and Police hassle if you speed on public roads. As Penti Arrikala once said when a policeman asked him why he was doing 130 on the M1: " Well, the car wouldn't go any faster"!

2 England

Footy fever rages and Grandslam pick up the official rights to the England team name: smart move, boys. The game will include complete details and digitised images of a 22-strong England squad from which the player can pick his team. Not out till after the World Cup, but if they lose you can always put the score right at home! As Bill Shankly once said, "Football's not a matter of life and death – it's more important than that!"

3 Hunt for Red October

Yes, it's been a computer game for ages – but with those Hollywood film boys finally catching up on the action, Grandslam are re-releasing the simulation at a special price of £14.99 – *and* they are 'developing' the game further to bring max satisfaction. Expect a release in the late summer. As the Russian Navy once said, "Where's that bloody submarine gone?"

HARWOODS

YOUR FIRST CHOICE FOR AMIGA

POW... Po...

HARWOODS LEGENDARY *Amiga* POWERPLAY PACKS

ALL OUR AMIGA POWERPLAY PACKS INCLUDE AN AMIGA A500 WITH...

- 512K RAM
- 1Mb Disk Drive
- 4096 Colours
- Multi-Tasking
- Built-in Speech Synthesis
- Mouse
- 3 Operation Manuals
- Workbench 1.3 System Disks
- Kickstart 1.3 Built-in
- All Connecting Cables

ALL OUR PRICES INCLUDE VAT AND STANDARD POSTAL DELIVERY SERVICE

Plus you can now choose either Flight of Fantasy or Batman Software to go with Packs 1,2 & 3 Absolutely Free!

AND WITH PACKS 1,2,3 & 5 YOU GET AN EXTRA...

BRILLIANT BONUS BUNDLE

ONLY FROM GORDON HARWOOD COMPUTERS!!!

- Running Man
- Nebulus
- Menace
- Chessmaster 2000
- Trivial Pursuit
- Tetris
- Commando
- Phobia
- Voyager
- Archipelagos
- Deluxe Paint II
- Mouse Mat
- Microswitched Joystick
- Tailored Amiga Dust Cover
- Tutorial Disk
- TV Modulator (Packs 1&5 ONLY)

AND NOW... You get a Great Mystery Software Title FREE too!!!

Amiga POWERPLAY — PACK 1

'The' Games Pack

Probably the Best Games Pack around. You won't need to buy anything else for ages and you'll be able to start to use your Amiga the moment it's out of the box!

Amiga A500 + Bonus Bundle

Only... **£399***

Or spread the cost with our Finance Facilities

Amiga POWERPLAY — PACK 2

The Games 'Plus' Pack

Containing the super Powerplay Pack 1 & a Commodore 1084S Stereo Colour Monitor plus a Free Tailored Monitor Dust Cover!

See those Games even more clearly...

Amiga A500 + Bonus Bundle +CBM 1084S Colour Monitor

Only... **£599***

Amiga POWERPLAY — PACK 3

The 'Extra' Plus Pack

Take our 'Powerplay' Pack 2 and add Star's fantastic LC10 Colour Printer to give you the Ultimate Colour home entertainment computer system!

(If you prefer another printer simply deduct £209.95 and add the price of the alternative you require, choose from our lists)

Amiga A500 + Bonus Bundle +1084S + Star LC10 Printer

Only... **£799***

Amiga POWERPLAY — PACK 4

'Powerpro' Pack

Amiga A500, Star LC10 Colour Printer, CBM 1084S Stereo Colour Monitor, 'Protext' Version 4.2 Word Processor, 'Superbase II' Database, 'Maxiplan 500' Spreadsheet, Tutorial Disk, and Deluxe Paint II' + Mouse Mat, Ten 3.5" Blank Disks with Library Case, Three Great Quality Dust Covers Tailored for Amiga, Monitor and Star Printer!

Remember you can choose alternative printers too!

Only... **£829***

Amiga HARWOODS COMPLETE STUDENTS PACK — PACK 5

AMIGA A500 PLUS....Publishers Choice (DTP-Includes Kindwords Vers. 2), Midi-Master I/Face, Dr. T's Midi Rec. Studio, BBC Basic Emulator, Maxiplan 500 S/Sheet, Superbase Personal D/Base, Amiga Logo, F18 Interceptor, Ten Blank 3.5" Disks with Disk Wallet,

PLUS OUR 'BRILLIANT BONUS BUNDLE' FREE!

Only... **£549***

REMEMBER TO CHOOSE EITHER YOUR FREE 'BATMAN' OR FREE 'FLIGHT OF FANTASY' SOFTWARE COLLECTION A OR B WHEN YOU BUY YOUR HARWOODS POWERPLAY PACK 1, 2 OR 3

BATMAN THE MOVIE *Collection A*

- Batman the Movie
- New Zealand Story
- F18 Interceptor



FLIGHT OF FANTASY *Collection B*

- Escape from the Planet of the Robot Monsters
- Rainbow Island
- F29 Retaliator



HARWOODS THE NAME YOU CAN TRUST



FINANCE FACILITIES

Gordon Harwood Computers offer facilities to pay by our budget account scheme for most items. APR 36.8% (Variable) Credit sale terms are available to most adults of eighteen years or over, subject to status. Simply phone or write and we will send written details along with an application form. Applications are required in advance and are available to full time U.K. mainland residents only.

Written quotations available on request.

* Credit sale terms with or without a deposit, can be tailored to suit your needs.

ORDERING MADE EASY - COMPARE OUR SERVICE



ORDER BY PHONE: Phone our Order Hotline with your Mastercard, Access, Visa or Lombard Charge Card quoting number & expiry date.



ORDER BY POST: Make cheques, bankers-building society drafts or postal orders payable to GORDON HARWOOD COMPUTERS. (Personal or business cheques take 7days to clear from day of receipt before your order is despatched)

Please send Name, Address, and most importantly if possible, a Daytime Telephone Number along with your order requirements.



TO PAY BY GIRO TRANSFER: at your own bank, simply phone us for details (Transfers normally take 3-5 working days).



FREE POSTAL DELIVERY: Goods in UK Mainland (5-7 day delivery). **OR COURIER SERVICE** ...Add £5 per major item for next working day delivery, UK Mainland most regions.

(Goods normally despatched on day of ordering or payment clearance)



EXPORT ORDERS: Most items are available at TAX FREE PRICES to non UK residents when visiting us or for export shipment. Please contact us for ordering information.



REMEMBER AFTER YOU'VE BOUGHT FROM HARWOODS, WE'LL STILL BE HERE...

TECHNICAL SUPPORT: You will be given our Exclusive Technical Support Phone Number to call should you require any help or advice on any aspect of the system you have purchased.

12 MONTH WARRANTY: New items proving faulty within 30 days of purchase are replaced with NEW UNITS unless otherwise stated. For the whole guarantee period, all warranty service will be completely FREE OF CHARGE and a FAST turnaround is GUARANTEED by our OWN ENGINEERS!

COLLECTION FACILITY: Any computer, monitor or printer requiring warranty service can be collected from your home FREE OF CHARGE during the guarantee period (UK Mainland only)

FULL TESTING PROCEDURE: All computers are tested prior to despatch, and all items are supplied with mains plug and leads as required - just connect up and use straight away.

ERPLAY
tfolio

MONITORS

PHILIPS CM 8833 STEREO

Full 14" Stereo High Resolution Colour Monitor

- SCART Euro-connector fitted as standard
- RGB/AI, TTL, Comp. Video & stereo audio inputs
- Can also be used as a TV with tuner or VCR
- Features fold down tilt-stand
- Twin Speakers
- FREE lead for computer of your choice
- FREE FROM HARWOODS... 12 Month on site service warranty.

All this and a Free Tailored Dust Cover... **£249**

COMMODORE 1084 S

Full 14" Stereo High Resolution Colour Monitor

- RGB/AI, TTL, Composite Video & Audio Inputs
- Can also be used as a TV with a tuner or VCR
- Features fold down tilt stand
- Twin Speakers
- Supplied with cables for A500, CGA PC, C16-64-128

With Free Tailored Dust Cover... **£239**

SUMMER CLEARANCE SALE
PRODUCTS AT LESS THAN ADVERTISED PRICES!!!
PHONE NOW for deatails of our EX-DEMO and REFURBISHED STOCK; Just about every product we sell at VERY SPECIAL PRICES and... ALL with a WATERTIGHT GUARANTEE now available!
SAVE £££'s...SAVE £££'s...SAVE £££'s

Amiga SUNDRIES

DIEGO'S SPECIAL OFFERS...DIEGO'S SPECIAL OFFERS

MUSIC X -FULL VERSION-SOFTWARE £109.95
Including Midi Interface...ABSOLUTELY FREE!!!

512K RAM UPGRADE £64.95
Including...'It Came from the Desert' and FREE... Mystery Major Amiga software title and Utility Software Disable Disk.

STORAGE DEVICES

HARD DRIVES

COMMODORE A590 20Mb HARD DISK DRIVE FOR AMIGA A500, WITH FREE 0.5 Mb MEMORY
Commodore's own hard drive for the A500

- Autoboot with Kickstart 1.3
- Sockets for up to 2Mb RAM expansion
- DMA access
- External SCSI port
- SUPPLIED WITH A FREE...0.5Mb MEMORY EXPANSION

BUY YOUR A590 FROM HARWOODS AND IT ALSO COMES COMPLETE WITH SOME FANTASTIC 1Mb SOFTWARE ABSOLUTELY FREE! WORTH OVER £100!
FANTAVISION...Animation Package
COMIC SETTER...Cartoon Creation (Design your own comic book cartoons and print them tool)
SPRITZ PAINT...Paint Program

Super Low Price... **£399**

A590 HARD DISK (As Above) WITH 2Mb MEMORY
- Expansion fitted and ready to use straight away

NEW LOW PRICE ONLY...£499.00

40Mb VORTEX HARD DRIVE FOR BOTH AMIGA A500 AND AMIGA A1000
- For both A500 and A1000 as supplied
- Autoboots on ANY Amiga

GREAT VALUE AT ONLY...£499.00

FLOPPY DRIVES

EXTERNAL FLOPPY DISK DRIVES
The drives listed below have the following features...
- Enable/Disable switch
- Throughport
- LED Access light, super quiet
- Suitable for A500, A1000, A2000

CUMANA CAX 354 3.5" SECOND DRIVE
- 25mm Super slimline 3.5" drive

A REAL BARGAIN AT ONLY...£89.95

CUMANA CAX 1000S 5.25" SECOND DRIVE
- Amiga DOS and MS DOS compatible

SAVE MORE THAN EVER...£129.95

HARWOODS SUPERSLIM 3.5" SECOND DRIVE
- Extra storage and great value too!

'SUPERSLIM PRICE' ONLY...£64.95

ACCESSORIES

COMMODORE

A501 RAM PACK £99.95
GENUINE CBM ram pack with real time battery backed clock. This add-on DOES NOT invalidate Commodore's warranty.

A520 TV MODULATOR £19.95

QUALITY ACCESSORIES

NAKSHA Microswitched Mouse £29.45

FLOPPY DISKETTES

10 GENUINE COMMODORE 3.5" BLANK DISKS £9.95

QUALITY CERTIFIED 3.5" BULK DISKS (supplied with labels)

Ten, with library case	£9.49
Ten, uncased	£8.49
Eighty, uncased	£49.95
Hundred, uncased	£59.95
Eighty with LOCKABLE storage case	£54.95

PHONE FOR LARGER QUANTITY DISCOUNTS!

PRINTERS

All printers in our range are Dot-Matrix and include the following features...
Standard Centronics parallel port for direct connection to Amiga, PC's, ST etc. and come with... FREE CONNECTOR CABLES!

Free Tailored Dust Cover With Every Star Printer Bought!

STAR LC10 - 120/25 cps
Our most popular Mono Dot-Matrix printer and at a super low price £169.95

STAR LC10 MkII - 150/30 cps
Brand new superfast MkII version of the ever popular LC10 printer.
- Multiple font options from front panel
- Excellent paper handling
- Simultaneous, continuous and single sheet stationery

£184.95

STAR LC10 COLOUR - 120/25 cps
Colour version of the LC10...
- Allows full colour dumps from Amiga
- Superb text quality
- Can use black LC10 ribbons
- Our most popular colour printer!

£209.95

STAR LC 24 10 - 180/60 cps
24 Pin version of the Star LC Series with
- Exceptional letter print quality

£249.95

STAR XB24 10 COLOUR - 240/80 cps
Very fast LQ 24 Pin Colour
- Includes UK Mainland on-site maintenance for a FULL 12 MONTHS!

£479.95

STAR POSTSCRIPT LASER - 8ppm C/W 35 FONTS
- 300 DPI, 2Mb. Memory upgradable to 5Mb.
- Emulations include: HP Series II, Epson EX800, IBM Proprinter and Diablo 630
- Includes UK Mainland on-site maintenance for a FULL 12 MONTHS!
- Free cable & courier delivery (3-4 days)

£1995.00

CITIZEN SWIFT 24 PIN COLOUR - 160/50 cps
The MOST competitive 24 Pin Colour Printer available Today!!! £349.95

CITIZEN 120D - 120/25 cps 2 YR WARRANTY
Very reliable low cost printer, interchangeable interfaces available for Centronics RS 232 or Serial Type for CBM 64 etc. £149.95

NOTE! All our Star printers are genuine UK specification.
Characters Per Second speeds quoted are Draft/LQ at 10cpi

A FULL RANGE OF PRINTER RIBBONS ALWAYS AVAILABLE

GRAPHICS HARDWARE

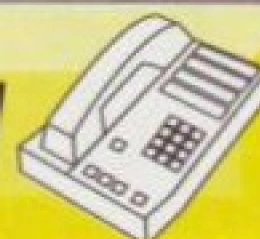
DIGIVIEW GOLD 4.0 VERS. 4.0
Digitises static images in Black and White or FULL COLOUR (using filters provided) and all resolutions supported (memory permitting). Creates IFF and HAM files. Uses B&W (or colour with B&W mode) video cameras.
NEW LOWER PRICE... £119.95

HITACHI VIDEO CAMERA
Mono, 650 scan lines. For photographic quality digitising with Digiview!
Super Low Price! £234.95

COLOUR PIC REAL TIME FRAME GRABBER
Instant colour frame grabber from moving video. Capture superb digitised video images in a range of resolutions from standard composite video source such as domestic TV video recorder or camera in 50th of a second.
Super Price......£439.95

RENDALE GENLOCKS
8802 SEMI-PROFESSIONAL £189.95
Complete with SOFTWARE CONTROL CABLE & BNC to PHONO CABLE!!!
8806 PROFESSIONAL £749.00

FASTORDER HOTLINE-0773 836781



e'll soon be moving to new purpose built premises where we'll be able to ffer you an even more comprehensive service - see future ads for details

VISIT OUR SHOWROOM

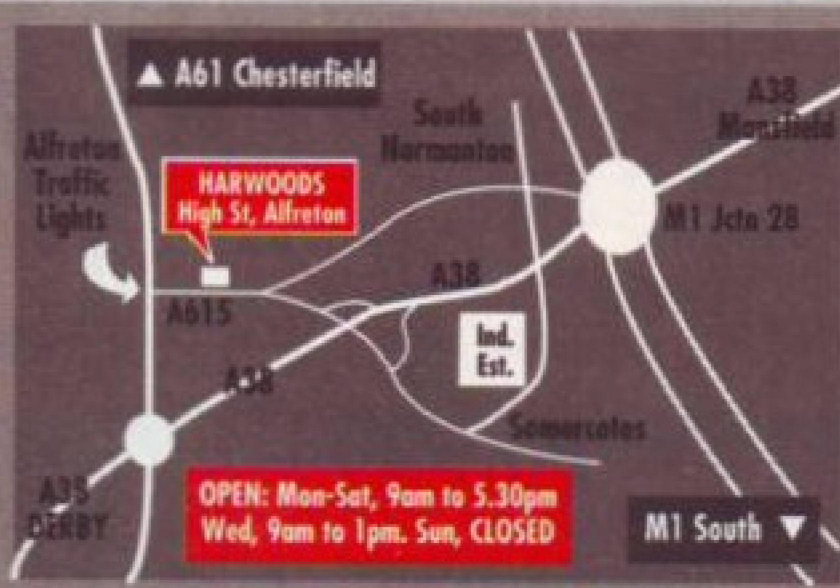
Please pay us a visit where our full range of advertised products, AND MORE, is on sale. Come and see for yourself amazing Amigas and a whole host of peripherals, software and accessories.

REMEMBER, WE ARE NOT JUST ANOTHER MAIL ORDER COMPANY

STOP PRESS...STOP PRESS...STOP PRESS

During Aug/Sept we'll be moving to our new purpose built showroom and warehouse facility in Alfreton. We'll then be able to offer an even more extensive service, but, don't worry if you need to contact us quickly our phone numbers will stay the same. Watch our future ads.

All listed prices are what YOU PAY, and there are NO HIDDEN EXTRAS! VAT and postage are included and prices are correct at time of going to press (Pack details may vary from time to time). E & O E. Offers are subject to availability and are currently advertised prices.



GORDON HARWOOD HARWOOD HARWOOD Computers

GORDON HARWOOD COMPUTERS
DEPTAMF/B8, 69-71 HIGH STREET
ALFRETON, DERBYSHIRE, DE5 7DP
TEL:0773 836781 FAX:0773 831040

A day in the life of a tune

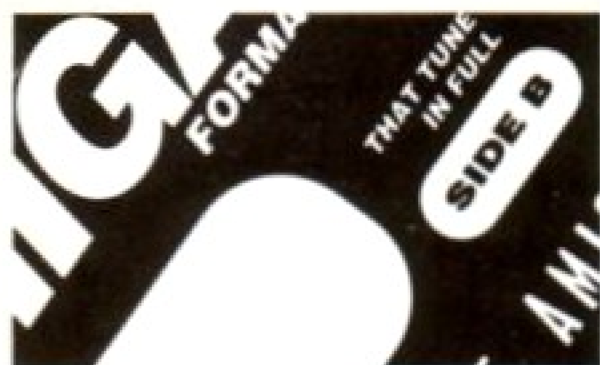


Making music with an Amiga can be quick, simple and highly successful even for absolute beginners. Resident composer **JOHAN SEBASTIAN BATES** shows how easy it all is...

The music pages this month become a veritable monster of a section. First of all, you can't have failed to notice the audio cassette on the front cover. On this is a step-by-step guide to putting a tune together.

All you have to do is follow the text along with the cassette and away you go – a bit like those magazines that build into an encyclopedia in 52 weekly parts, except much more informed and considerably cheaper. The other side of the tape contains the full race whizzo version of the tune with all the trimmings.

Not content with this, your fun-loving music editor has bust several guts to put the necessary files onto the Coverdisk for both music sequencers and this month's demo program, *Quartet*. (Jon will accept flowers, bottles of Southern Comfort and the like to aid his recovery.) And on top of all this, we offer a review of the very latest American software to be washed up on our shores, namely *Bars and Pipes*. We first heard of this way back at Christmas and the Stateside reports were glowing, so this could be a serious contender for the music program of the year award. Does m'learned friend Maff Evans agree? Find out on Page 25.



ON the TAPE

On the A side of the tape there are, faithfully recorded for your delectation, the various stages that went into putting the piece together. The B side is the full production of the completed song.

To help you to follow how it was done, listen to the A side while reading the track list below and looking at the screen shots. The pictures are taken using *Music X*. Although it would have been really nice to have the same piece of music on lots of different sequencers the length of the article would have started to resemble a decent sized book.

THE A SIDE

MUSIC-X Perf: amigaform1.perf SEQUENCER
BEGIN END CUE1 CUE2 CUE3 CUE4 SET
PAUSE PLAY RECORD STOP
Clock: 0001.01.000
00:00:00.00
STORE EDIT DELETE PREVIEW
092
Memory: 17681 Events
4/4
Bar Seq Bar Seq

Seq	Mem	Bars	Channels	CST	Time	Sequence Name	Out	<< >>
001	112	1	1	C--	Rel	Metronome Sequence	INT	-0000
002	1162	4	16	C--	Rel	kit	Exl	00000
003	1902	5	16	C--	Rel	hats	Exl	Off
004	1102	4	16	C--	Rel	hats2	Exl	00000
005	-	--	-	-	-	*		---
006	-	--	-	-	-	*		---
007	-	--	-	-	-	*		---
008	-	--	-	-	-	*		---
009	-	--	-	-	-	*		---

▲ Track 1
This is where it all starts: the basic drum pattern, split into kit and hi-hats, is put in against the metronome and quantized to make sure that the foundation of the song is rock solid. What you hear is a four-bar drum pattern, which was later shortened by looping to save memory. It has already been quantized. If you look at the picture above, you will see that a previous attempt at a high hat has been turned off. You can hear it is slower than the final version.

▼ Track 2
Now shortened, the pattern is looped and put back to the proper speed. *Music X* notes the number of bars and amount of memory used (below).

MUSIC-X Perf: amigaform2.perf SEQUENCER
BEGIN END CUE1 CUE2 CUE3 CUE4 SET
PAUSE PLAY RECORD STOP
Clock: 0002.03.047
00:00:04.02
STORE EDIT DELETE PREVIEW
093
Memory: 18039 Events
4/4
Bar Seq Bar Seq
1 Metronome Se
2 kit
2 hats2

Seq	Mem	Bars	Channels	CST	Time	Sequence Name	Out	<< >>
001	-	--	-	-	-	*		---
002	582	2	16	C--	Rel	kit	Exl	00000
003	-	--	-	-	-	*		---
004	372	2	16	C--	Rel	hats2	Exl	00000
005	-	--	-	-	-	*		---
006	-	--	-	-	-	*		---
007	-	--	-	-	-	*		---
008	-	--	-	-	-	*		---
009	-	--	-	-	-	*		---



TRACK 1 • 10.00 – 11.00am

All fired up and ready to go. The creative juices are flowing and everything is set for a good music-making day ahead. First job is to get the rhythm sorted by laying down the drum patterns.

First of all, you need a metronome – something that is going to keep you in time when you start putting down the basic rhythms and bass patterns. *Music X* automatically loads one when it boots up – for *Quartet* I put in a hi-hat played pretty loud on the beat. Other sequencers have a built-in click, or can play a note on your MIDI instrument. Having picked a suitable speed I started messing around with drum patterns.

The basic pattern is a typical rap bass and snare drum rhythm. This went down first and was quantized – rounded up – so that it felt solid and not out of time. I only put down four bars because the next stage is to put in a number of repeats which saves both time and valuable memory space. Since *Music X* is a large program in itself and I am only running on a weedy 500 memory is of the utmost importance if we are to get a decent piece out of it. At one point it kept telling me that there was not enough room to record anything at all. I solved this by turning off the background workbench, a technique you can use with several sequencers.

TRACK 2 • 11 – 11.30 am

First problem is encountered when the drums threaten to take up too much space. There is a solution...

Even four bars of drums only left me with 2,565 events left – the drums had taken up 225 events and I had only done four bars' worth. So back to the think-tank and I decided to go with just two bars of kit and one of hi-hat. Most sequencers will let you repeat short sections of each track; *Music X* will automatically do this when you start to join sections together.

The final tempo that you hear things at is, of course, not necessarily the speed at which events were





recorded. The drum kit itself was recorded at about 93 beats per minute but the hi-hats were done much slower. The pattern for the hi-hats needed some careful quantization – there are lots of them to the bar – and technically the pattern I used is an extremely fast swing time, which means you can't try to line the notes up to your average 16th or even 32nd notes. It has to be 24 or 48 notes – that's triplet semi quavers.

TRACK 3 • 11.30 am – 12.15pm
The morning's gone well, despite re-jigging the drums, and the bass line feels good. But – damn! A quick trip to the kitchen for a cuppa and a snack and not enough care with those tangled leads on the way back. That's an hour's unsaved work down the drain.

The same space-saving idea used on the drums was used for the main bass riff; two bars, again, looped round. The bass riff was invented in the same way as the drum rhythm; mess around over the existing pattern until something feels about right. In this case I recorded several ideas and then picked the one I liked best.

The bass line was corrected by hand – the first time I played it in I was so far out on the first note, but the rest was OK, so rather than re-doing it, it was actually better to fix up the first note by moving it into position. Quantization could well have pushed it into the wrong place and maybe lost the feel of the rest of the track.

TECHNICAL CORNER

COMPUTER KIT

The tape was put together using an Amiga 500 running *Music X* and also *Quartet*. The MIDI interface was the AMAS one that comes with the sampler software of the same name from Microdeal.

Theoretically any MIDI interface will do, but after five hours of complete MIDI lunacy, instruments playing anything but the right notes and Amiga 500s crashing or having long-term sulks, I settled on this interface as the most reliable. Expect an article on the aerodynamic properties of MIDI interfaces soon!

KEYBOARDS AND MODULES

The main keyboard and sound source was the brand new super-duper sticky swisher, the SY77 from Yamaha. This was in multi-timbral mode and the keyboard was in 'local off' mode, so that in effect it was a separate MIDI keyboard and tone module. The other modules used were the Phm from Kawai and a Casio CSM1, which was used mainly for the percussive effects. Incidently, both the latter multi-timbral modules cost less than £200 each unlike the SY77 which will set you back in the region of £1999.



The Disklavier from Yamaha.

EFFECTS

All reverb and other effects come from two sources: the SY77 itself, which has two digital reverbs and two effects units built in, and an old Proverb 200 Mk1 which has 200 reverb and effects presets switchable via MIDI – handy for wacking in fast effects and changing back quickly. This is also now available at silly prices.

MIXING

All the mixing was done by *Music X* itself. By putting in volume controls for each track where necessary I got the balance of instruments just how I wanted it – there are plans for future versions of the software to have a volume slider page mimicking the configuration of a mixing desk.

RECORDING AND MASTERING

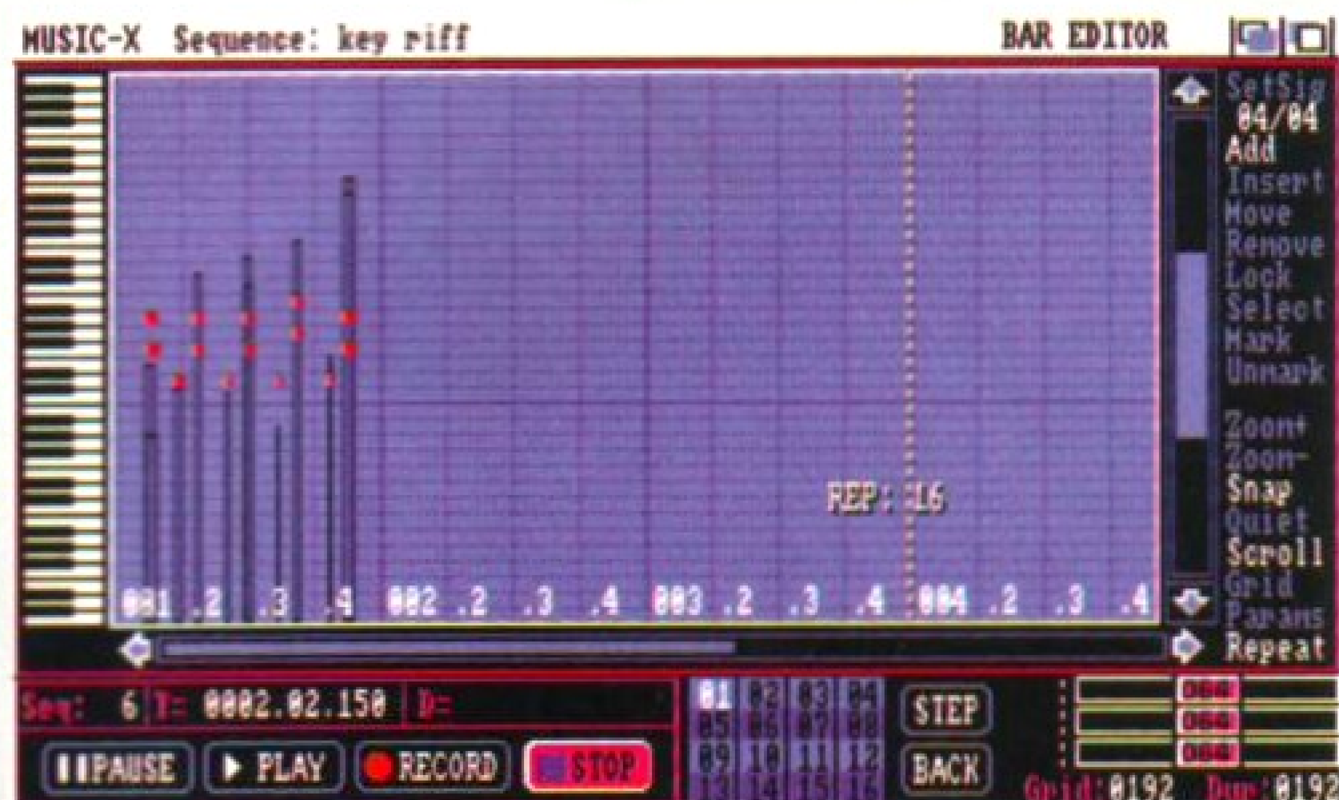
The finished version was recorded onto a DAT. For the uninitiated, a DAT machine is a Digital Audio Tape-recorder, which gives out better quality than a CD and, of course, can both record and play back. The cassettes look like tiny weeny VHS video tapes and play for the usual 60, 90 or 120 minutes and, like video tapes, they play one way only.

DAT will soon be available for the domestic market, but only when they have sorted out a foolproof method to discourage CD copying in a big way. The problem is not that people will copy the audio signal – that's being done every minute with double tape decks – but rather that they can copy digital data. If you connect the digital data output of a CD to the digital data input of a DAT, you can make an absolutely perfect copy of the original – just like copying disks – with no loss of quality.

DAT has been around for a couple of years now in professional studios, but maybe this Christmas it will hit the high street. DAT player/recorders are seriously stunning in quality.



The all-new Yamaha SY77 synthesiser used for this feature.



▲ Track 3
The bass riff on its own. It is only two bars long and again is looped round. I went for a fat analogue sound to give the bottom end of the tune weight.

Track 4
The unusual keyboard riff. 'Unusual' because it is a single-bar pattern but extended by two empty bars to make a three-bar pattern that will not occur in the same place every time when the track is looped. Figure 3 shows the Bar Editor page, where the riff occurs at the beginning – the dark grey upright bars are the velocity and the red oblongs are the notes. After that there is 2 bars of nothing right up to the upright yellow dotted line which signifies the end of the pattern, with the REP:16 command which loops it round again.

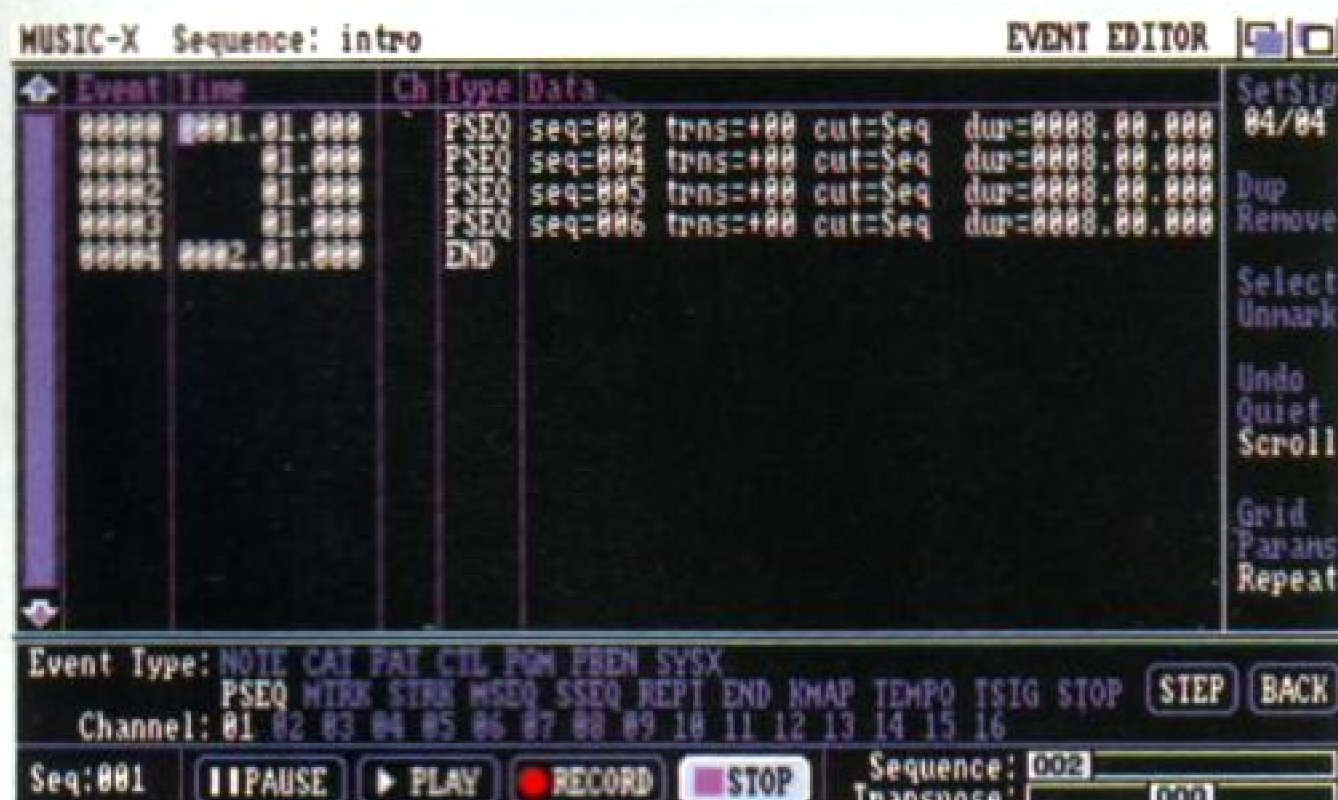
Track 5
Still a little bit slower than the final version, the main rhythm, bass and keyboards sound OK together – with no nasty bumps and lumps which might mean that one part is out of time with another.

Track 6
Now the backing has a tune put over the top of it. Recorded at a comfortable speed to make life easy it has eaten it's way through about twice as much memory as all the backing tracks put together because it uses aftertouch and pitchbend.

ON the TAPE

▼ Track 7
The picture below shows how all these small sections are grouped together to form the intro. In effect they are little sub routines scooped up together and running simultaneously. *Music X* uses a separate track to control these and calls the command PSEQ, which stands for play sequence. However you have to get the durations and start times correct to the letter otherwise lunacy sets in.

Track 8
A very slow stab as it was originally written, it did actually change rhythm slightly when it was quantized and fine tuned by hand. It is not yet corrected and therefore the instruments don't sound quite together. The fast drum fill has not yet been tagged onto it.



The golden rule is IF IT FEELS GOOD – LEAVE IT. Another golden rule is Save regularly, like about every 10 or 15 minutes. If you don't, then as soon you trip over that dodgy lead that you meant to fix a week or three ago you can bet that the last four hours' work is disappearing into inner space. I can tell you from personal experience.

TRACK 4 • 12.15 – 1.00pm
Time for a weird piano riff.

I decided to record only one bar of the piano riff in the background. So as not to make it too tedious I put two blank bars after it to make up a three-bar phrase – a contrast to most music which is in even-numbered phrase lengths. By repeating the three-bar phrase over the other two and four-bar patterns it made for an interesting combination.

TRACK 5 • Grab some lunch and see how it sounds so far.

TRACK 6 • 3.00 – 5.00pm
The first main tune is improvised until something catchy pops up. Time for some clever pitch-bending.

The first main tune, which I've called simply First Bit, was just improvised over the backing until I got something that sounded a bit catchy – notice the use of a quick bit of pitchbend on a couple of notes. Things like pitchbend, modulation and aftertouch are very greedy when it comes to memory, so when you only have a few 'K' to go at, think before you use them.

Another space-saving tip is to use a filter. Most sequencers have some sort of filtering facility to thin out the data as it comes in to the software. If you can decide in advance that you would need – say – a touch sensitive effect on a voice, then filter that information out before it clogs up the memory with unwanted and unused data.

TRACK 7 • 5.00 – 7.30pm
It's been a good afternoon and eveything's in place. Only trouble is getting those sections to fit together. Frustration doesn't come into it – that monitor's about to hit the street!

When it came to assembling the piece I used the play sequences in *Music X*. Many other sequencers have a similar concept where small sections are then assembled into a complete song. Usually you can run more than one track at the same time and cut from one part to another. Again it saves on memory and time.

The way I did this in *Music X* was to 'nest' various sequences under sub-headings like Intro, Verse, etc. and sequence them off from a Master track. If you have used *Sonix* or *Soundtracker* they employ a similar concept, although of course they are working with numbers arranged in tables and are consequently much harder to get to grips with.

Until now, I have not heard the various sections that make up the song played together, although I think I know what they will sound like. To get them to play one after another I created a control track that pulls all the other sub-sequences together to form a whole piece. This is sequence number 15 and called Master.

After some head-scratching caused by myself not getting the sequences to nest correctly, we get the first part of the song up to bar 35 running all together and they don't sound too bad. The problem I had was that *Music X* needs a little gap at the end of each sequence to get to the next one. If you don't do that, it repeats the same sequence again whilst also running forwards and playing the next sequence. Result: chaos and another monitor dropped out of the window into the street.

TRACKS 8, 9 & 10 • 7.30 – 10.15pm
Back in the mood now, adding a stab to cheer up the second verse, completing it with a drum fill and listening to the first run-through of the tune so far.

The verse is a copy of the intro, but adding the First Bit tune into the



HARLEY-DAVIDSON: THE ROAD TO STURGIS

It's Harley heaven as you straddle your 1340c.c. Hog and scream through the box. You're off to the biggest bikers rally yet in Sturgis, South Dakota - if you can make it in time.

Speeding tickets, blow outs and plain dumb decisions could leave you eating dirt instead of burning rubber. There are five games with varying difficulty levels. The graphics are great and the sounds will outrage even the friendliest neighbour.

So climb on, max out and cruise the open road for the ride of your life.



Available for Amiga, Atari ST, IBM, Tandy and compatibles.



M I N D S C A P E

For further information on Mindscape products and your local Dealer, contact:
Mindscape International Limited, PO Box 1019, Lewes, East Sussex BN8 4DW. Tel. (044 486) 545/547.

Want to know where the real computer enthusiasts get together?

Write here

Please send me my **FREE** *copy of the Micronet brochure and show me how to really get 'in touch'.*

Name ______________________

Age ______________________

Address ______________________

____

Tel No ______________________

Machine type ______________________ C **AF2**

FREE MODEM* If you pay for a year's subscription in advance we'll give you a modem free when you join.

› *Send the coupon now to: MICRONET, P.O. Box 1351, London, NW2 7HZ.*
OR phone **FREE** *on* ***0800 200 700*** *for your* **FREE** *Micronet brochure.*

› *Micronet is the place where thousands of computer enthusiasts get together. You can talk to other members with your computer, hold conferences and send electronic mail, telex and fax.**

› *Up-to-the-minute hardware and software news, reviews and features keep you right up to date.*

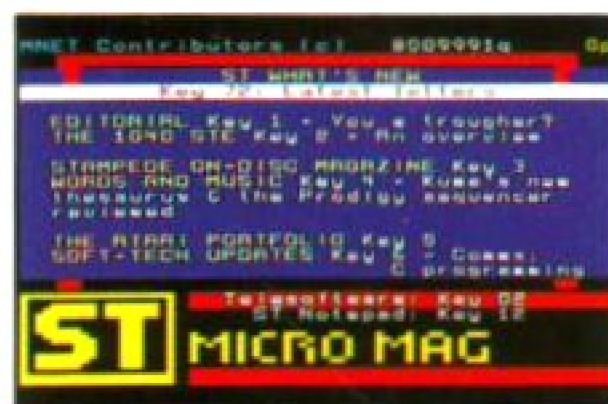
› *You can download the programs of your choice from our constantly expanding selection of* **FREE** *software programs.*

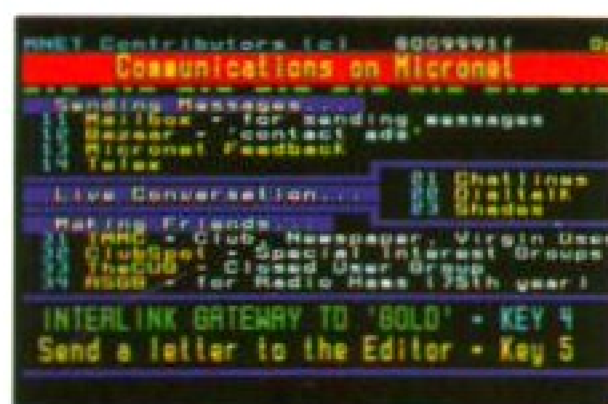
› *If you enjoy a challenge, Micronet is the place to be for today's best multi-user games.*

› *And direct access to the huge Prestel database gives you a wide variety of on-line information, from share prices to theatre bookings.*

› *When you join, your* **FREE** *comprehensive welcome pack tells you all you need to know, and quarterly mailed copies of LOG ON, the Micronet members magazine, will keep you up to date and in touch.*

› *From about 25p per day (plus local phone charges*), this is an offer that shouldn't be missed – get in touch now for full details.*









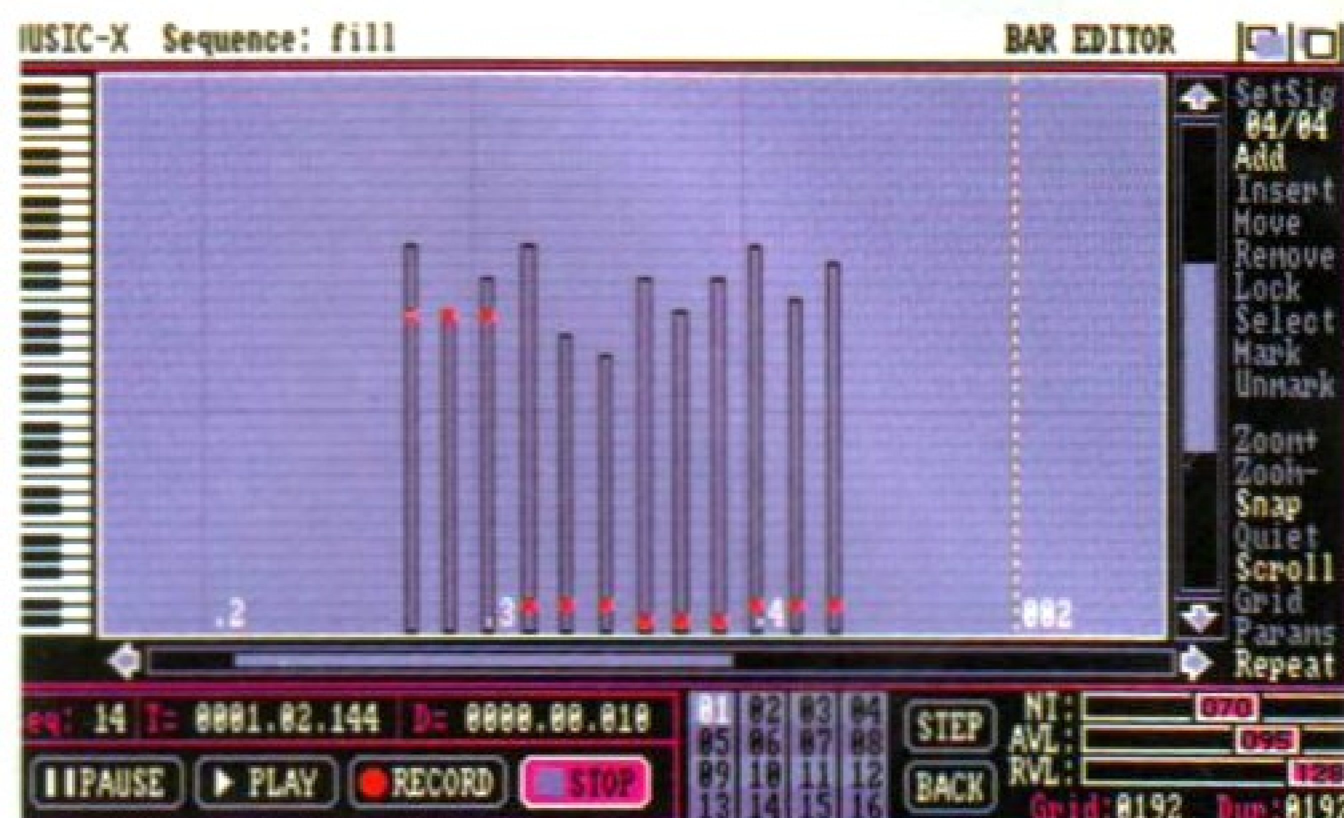
In touch. Informed. In a word ...

MICRONET

** FAX is an optional extra via the INTERLINK gateway. Cheap rate local phone charges are less than 1p per minute inclusive of VAT. Free modem offer available in the UK only to new members while stocks last.*



ON the TAPE



▲ Track 9
Now it has the drum fill. To get the fast notes it was recorded at this snail's pace. Figure 5 shows you how the fill looks in the bar editor, the red notes are the drums, three strokes on each one. You can see how they fit into just over one beat from just before .3 to just after .4 .

Track 10
The first version of the tune, with no chorus, but the speed is about right. Notice how the stab and drum fill is still a little bit messy and will need tidying up. There is also a slight problem in that one drum track is playing throughout the stabs and shouldn't be.

Track 11
Here is the chorus, but at a leisurely tempo. The actual melody line gets altered slightly later on for the final version although the chords remain in place as they are here.

▼ Track 12
The picture below is the visual representation of the order of sequences in the tune. As you can hear, no Chorus has been added as yet, but it does demonstrate how *Music X* creates a control track that controls other sequences – a routine commanding other sub routines.

Track 13
The final track on this side of the tape is the nearly complete version. Details like transposition have not been worked on yet and the solo is missing, but the balance of instruments is about right.

playing order. This became Verse 1. The second verse I felt needed to change at the end so, taking a copy of Verse 1, I then made up what I have called the 'stab', the bit that has everything playing sort of 'boom boom boom-di-boom' if you will excuse the Basil Brushism.

This was done first of all part by part, sequences 9 to 14, and checking that they all were heavily quantized to occur exactly on the beat. They were played in slowly, as was the electro drum fill straight after. All these parts were then tacked onto the verse sequence, but cutting in on bar eight and glued together under the title Verse 2.

TRACK 11 • 10.15 – 11.30pm

It's getting late, but all is going well at the moment. Now's the time to add the chorus.

Time to set up the next section. Copying the same drum pattern from the verse all it needed was a tweak on the bass section to alter the harmony and then to have some chords dropped on top. This section is built up and nested as a subroutine under the heading of Chorus and is on track 24. I tend, if I have a sequencer with a large number of tracks, to use them in blocks of 20 or so to allow for inserts after.

TRACK 12 • 11. 30pm – 12.15

It's gone Midnight and we're getting towards the end of a busy but successful day. The hard work is basically over: shuffle it together into instant Stock Aitken Waterman and you're away. The tune now begins to take on a life of its own, so a late couple of hours spent on the transposition and the solo should produce a final result.

Now we have an Intro, Verse 1, Verse 2, and a Chorus. Once you've tidied each section up the hard work is basically over. The main thing now is to string the whole thing together. After working with a piece of music for a few hours you tend to get the feeling for the way that sections are going to follow one another. The usual process is to have something like this:

INTRO
1ST SECTION
(which may be a verse).
2ND SECTION
(probably another verse).
3RD SECTION This is probably the chorus or'hook' line and is more interesting than the verse.
4TH SECTION Another verse and maybe a solo halfway through.
5TH SECTION Another chorus.
6TH SECTION Another chorus this time with the key shifted up.
7TH SECTION
Repeat chorus until fade out.

There you are – instant Stock, Aitken, Waterman. This pattern is also the format for most popular songs, not only in the 20th century but also in several previous centuries – which includes 'classical' music as well.

TRACK 13 • 12.15pm – 2.00am

It's all there, so the composite parts of the song now need to be glued together to give a finished product, all ready for mixing.

What I do now is 'glue' the sections I've created into a pattern, which is not too far removed from the one above. Thanks to the sequencer, the key change is made easy. You just make the Master track transpose that particular entry, making sure that it doesn't transpose the drums. If you



don't do this really silly things happen. Each drum is allotted a note number, whether in a drum machine or multi-timbral module/synth. If you transpose (shift the pitch) up then all the program will do is play the next drum up, whatever it may be. You could be faced with a drum track that has magically changed from a heavy bass and snare drum to triangle and hand clap if you don't remember to stop the drum track from being transposed.

From now on the song starts to take on a life of its own. Usually the solo, if one is needed, is dropped on quite near the end of the process and with a bit of luck you won't want to quantize this as it will tend to take the 'live' feel away from it.



When the whole thing is finally woven together, it's time to see if you can add little bits in just to spice up each section then mix the lot down. Most sequencers can accept MIDI volume control and this saves on a mixing desk although if, like me, you have more than one multi-timbral module, you will need some sort of simple mixing device to join the signals together before you get them to the tape recorder and amplifier.

The next day, 3.00 pm

Final mixdown. A late night last night, but the final mixing was left until today to avoid 'threshold shift', the loss of high frequency perception in tired ears.

The final mix is finished, the master tape is ready and before you know it the record will be on the radio and shooting towards the top of the charts. Or maybe not. Well, we can at least dream...

The final stage is to commit it to tape with the balance just as you want it. My favourite way of working is to try and leave the mixdown stage until another day, if possible, as usually your ears have taken quite a bending, especially if you have been listening on headphones. You get what is known as 'threshold shift' – in other words things seem to be quieter – and in fact you lose your perception of high frequencies.

For this reason you should leave the mixing to the following day if you can. Things always sound fresher anyway. On the B side of the cassette I just added one or two small sounds and some overall reverb to give the piece a little bit of air and space. Finished at last!

Next month we look at the best buys for cheap sound making, second-hand synths and keyboards included. Don't miss out!

ON the TAPE

THE B SIDE

Now turn the cassette over for the full version. This has had extra instruments added in. Not too many and in fact you would not really notice them if you hadn't heard the original. The is a very slight amount of room echo added from the Pro Verb to give an 'alive' feel to the whole piece. I have not used any super advanced techniques like changing synth sounds in the middle of the piece or speeding up and slowing down. Hope you enjoy listening to it. Oh and by the way, if you enjoy it so much that you fancy 'borrowing' it and trying to earn money from it, sorry, but the piece is copyrighted.

ON THE COVER DISK

Not only do you get a cassette but also an all talking, singing and dancing version of the song on the Coverdisk. It works like this. Contained on the disk are three files. The Demo version of *Quartet*, the cassette tune in a specially done version for *Quartet* and a MIDI file of the tune.

THE QUARTET VERSION

Full instructions on using *Quartet* can be gleaned from the Disk Extra pages and from the 'read me' file on the Coverdisk, but if you load up *Quartet* you can then load in the demo set of sounds followed by the cassette music file.

Flip to the Music editor page, press play and your Amiga should spring into life. You might like to try putting your own tune in and using some of the techniques used in putting together the cover cassette. You won't need a synth, of course, because all the sounds in *Quartet* are straight from the Amiga. If you don't like the sounds then you can alter them by using the sample editor or by loading in IFF files of your own.



THE MIDI FILES

If you have a MIDI sequencer running on the Amiga you might like to load in these files. What you will get is actually the sections as individual parts. Since no two sequencers use exactly the same format for sticking parts together to form a whole song it seemed the best way to get the nuts and bolts of the song to you. You can load them in, convert them to the file format for your sequencer and then stick them together in any order you like. The files are labelled, Chorus, Verse1 and Verse2. The essential and crucial MIDI information is:

Channel 1 is the Bass part.
Channel 3 is the Lead part.
Channel 4 is the keyboard piano part.
Channel 16 is drums.

As you will doubtless realise, you will need to get sounds that approximate to these to get it to work on your synth set up. As I mentioned earlier, there is no set standard for the drums, what note plays what drum etc. However the drums on the files are set up as follows:

Kick drum is A – number 45
Snare drum is E – number 52
Hi-Hat is A – number 57

The odd drums for the fill in are A# and D## and C# (numbers78, 39, 37). Depending on the system you are using you will have to change either the notes in the program or the drums on whatever module/keyboard you are using. Have fun.

If you produce a spectacular tape from it then send it without delay to the *Amiga Format* office. You never know, we might just give you a mention...

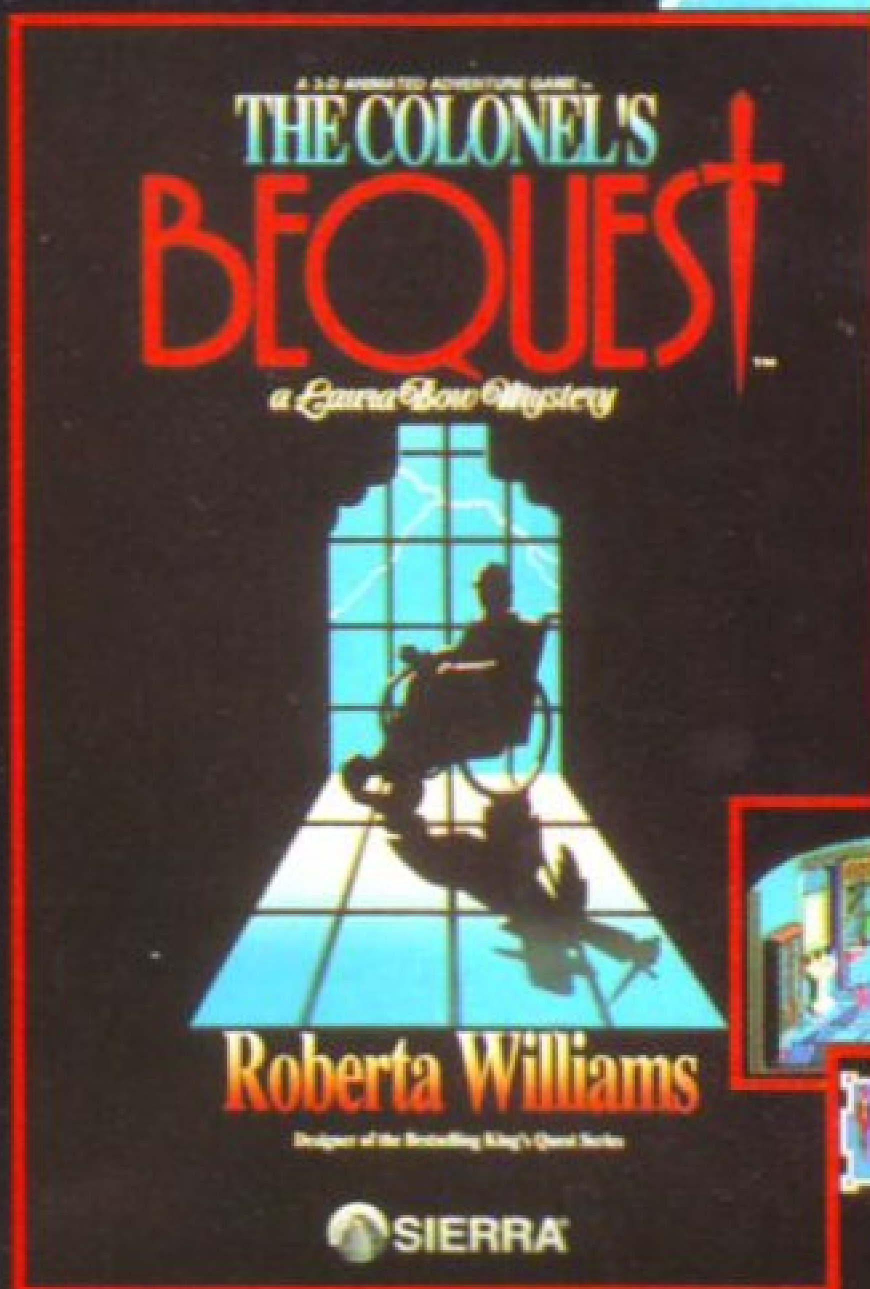
NEW RELEASES!

So You Wanna Be a Hero...

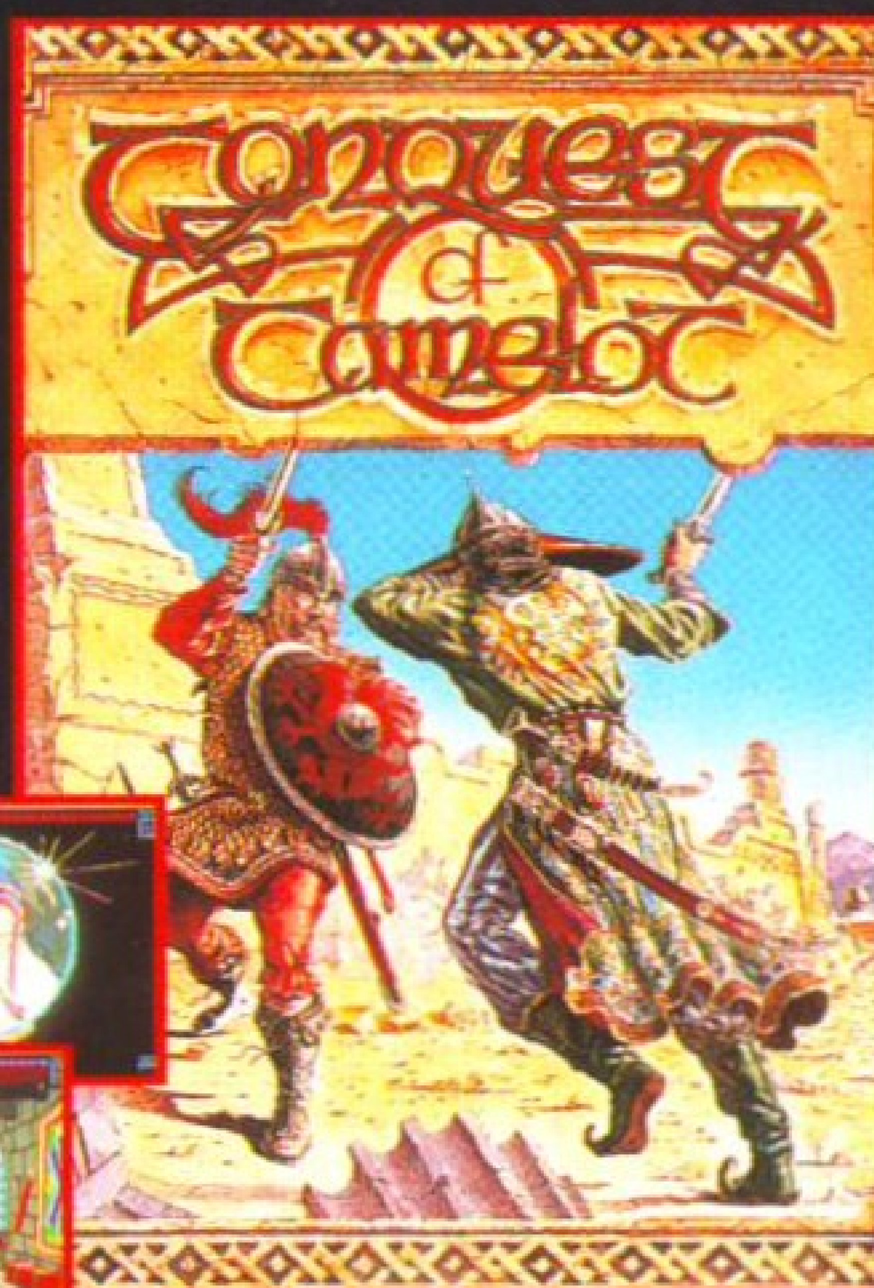
DYNAMIC THRILLERS & ADVENTURES ALL THE WAY!







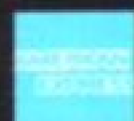









Available for your PC, Atari ST & Amiga at all leading computer shops or by mail order.

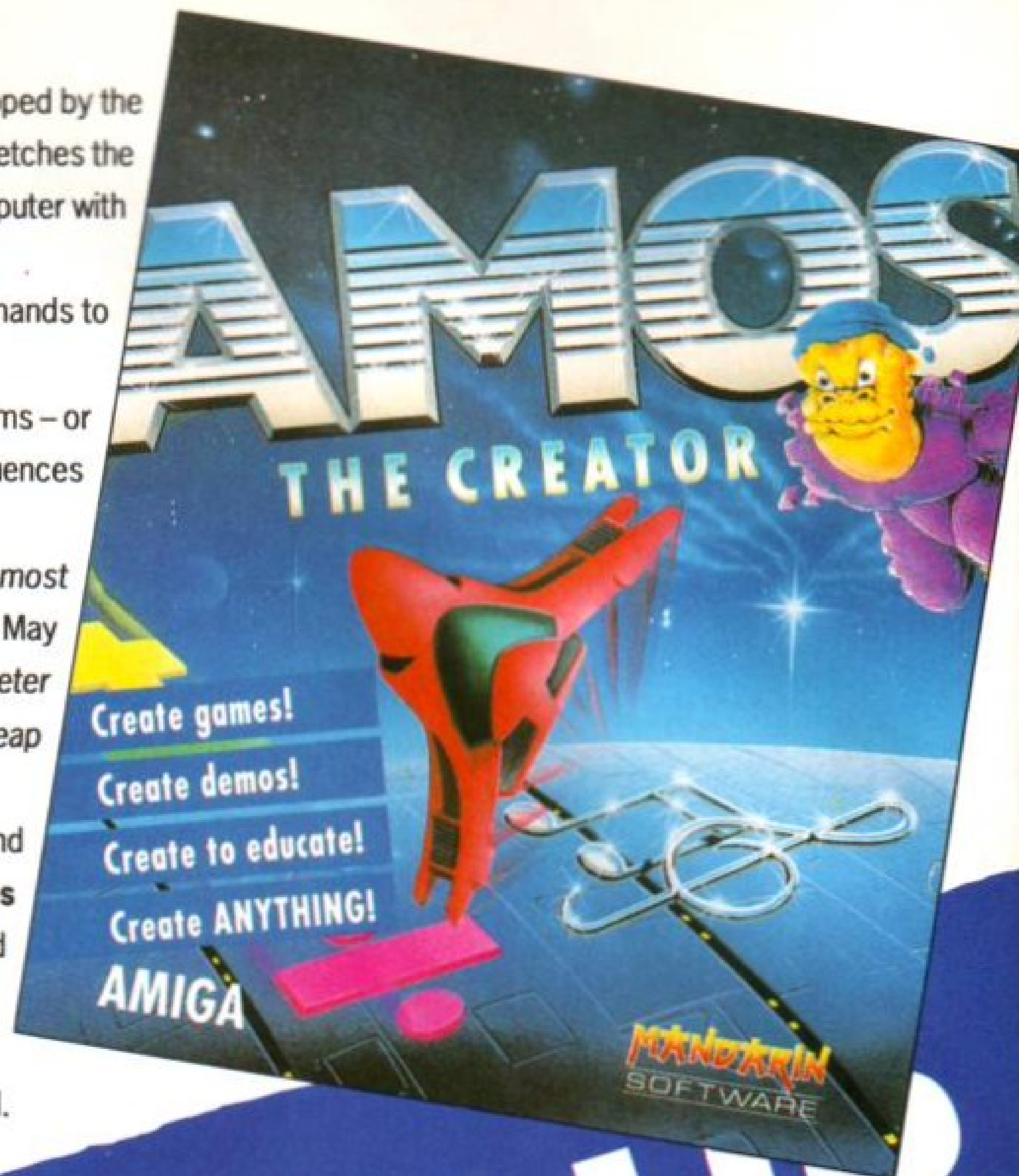




Mail Order: Intermediates Ltd. P.O. Box 847, Harlow CM21 9PH Tel: (0279) 600197

SIERRA®

Sierra Consumer Hotline: (0734) 310003




Design animated sprites using the feature-packed sprite editor


Create multi-screen layouts using the powerful Map Designer


Use the sophisticated program editor to design your creations

UNLEASH YOUR IMAGINATION


Play the addictive Magic Forest and see just what AMOS can do!


Explore the hidden depths of Castle AMOS in search of the secret prize



Leap across the lilies to learn your times tables the fun way in Number Leap


Create breathtaking graphical effects up to the standard of machine-code demos

ONLY £49.99!

WHAT YOU CAN DO:

- Define and animate hardware and software sprites with lightning speed
- Display up to eight screens on your TV at once – each with its own colour palette and resolution (including HAM, half-brite and dual playfield modes)
- Scroll a screen with ease. Create multi-level parallax scrolling by overlapping different screens – perfect for scrolling shoot-'em-ups
- Use the unique AMOS Animation Language to create complex animation sequences for sprites, bobs or screens which work on interrupt
- Play Soundtracker, Sonix or GMC (Games Music Creator) tunes or IFF samples on interrupt to bring your programs vividly to life
- Use commands like RAINBOW and COPPER MOVE to create fabulous colour bars like the very best demos
- Transfer STOS programs to your Amiga and quickly get them working like the original
- Use AMOS on any Amiga from an A500 with a single drive to the very latest model with hard disc

WHAT YOU GET:

AMOS Basic, sprite editor, Magic Forest and Amosteroids arcade games, Castle Amos graphical adventure, Number Leap educational game, 300-page manual with more than 80 example programs on disc, sample tunes, sprite files, AMOS Club Newsletter and registration card.

MANDARIN SOFTWARE

Please send me **AMOS – The Creator and my free copy of AMOS Sprites 600**

☐ I enclose a cheque payable to Mandarin Software for £49.99

Add £2 per program for Europe & Eire (£5 Overseas)

☐ Please debit my Access/Visa/Connect card number:

Expiry date: /

Name

Address

Postcode

Send to: Database Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB. Credit card orders: Tel: 051-357 1275

PUMP UP THE VOLUME





Want to learn to use a MIDI sequencer without any of the usual hassle? **MAFF EVANS** looks at a new American program that might just help.

These days, a lengthy discourse on how computers have put music within everyone's reach is a little redundant – anyone remotely interested in producing music must have seen the power and flexibility offered by sequencers, and the effect that they have had on modern music. What is becoming increasingly important is how easily this technology can be accessed by the novice without losing the power required by the professional musician.

Systems such as *Music X* and the classic *Pro 24* provide the functions necessary to produce high-quality music with little or no technical ability, but even these require a fair amount of knowledge of sequencer technology along with some idea about the ins and outs of MIDI in general. This can be a daunting prospect for those who wouldn't know a MIDI route-path from tribe of Amazonian Indians.

What is needed is a way to make the transition into the world of MIDI as painless as possible, by making everything as clear as crystal for the beginner, while retaining the ability to expand once the basic ideas have been grasped. The first major step along this path has been taken by American company Blue Ribbon Bakery with their unusual music package *Bars and Pipes*.

We're Laying a Pipeline

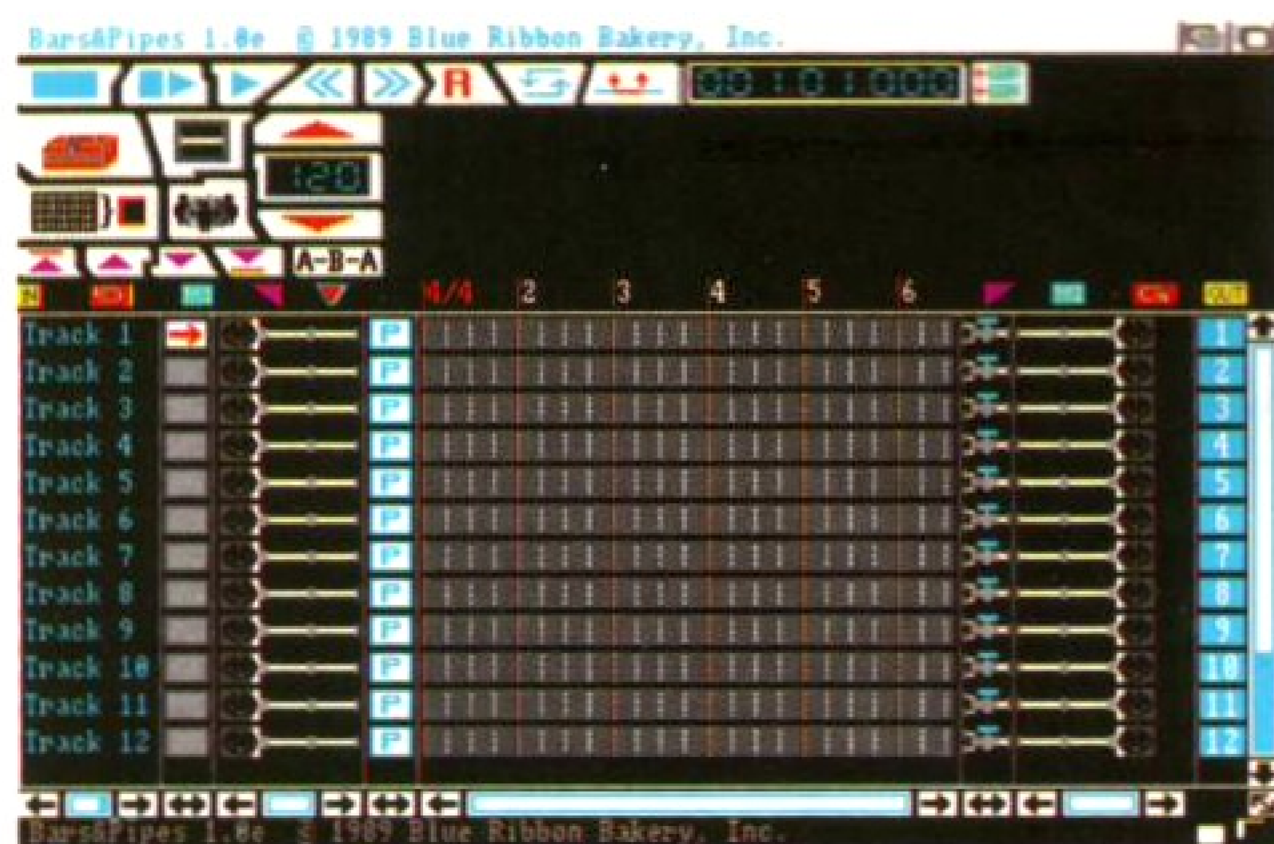
Bars and Pipes is a multi-track MIDI music package which allows all the functions required of a standard MIDI sequencer, but with a rather unorthodox system of presenting information. Instead of setting out MIDI path information in systems of tables and options as in most programs, *Bars and Pipes* utilises a far more original method. To understand this we'd better take a look at the main sequencer screen, which is shown in the picture just to the right.

The top of the screen displays standard 'transport' functions found on most sequencing packages – used to record and play back music in the same way as a tape recorder – along with other more specific functions, which will be dealt with later.

The most interesting section is the lower section of the screen. This is where the sequencer's track information is displayed. In the middle is the display showing the recorded information and to either side is a system of 'pipes', much the same as a house's plumbing system.

This, believe it or not, is the MIDI input and output information. *Bars and Pipes* uses the analogy of musical information running through pipes like water: by affecting that flow, manipulations of the musical data can be carried out.

For example, if you wanted to play a tune on the keyboard and record it onto two tracks of your sequencer, you simply connect a second 'pipe' to the main input, so that the data splits to flow along them both, ending up on two individual tracks. Simple, eh?



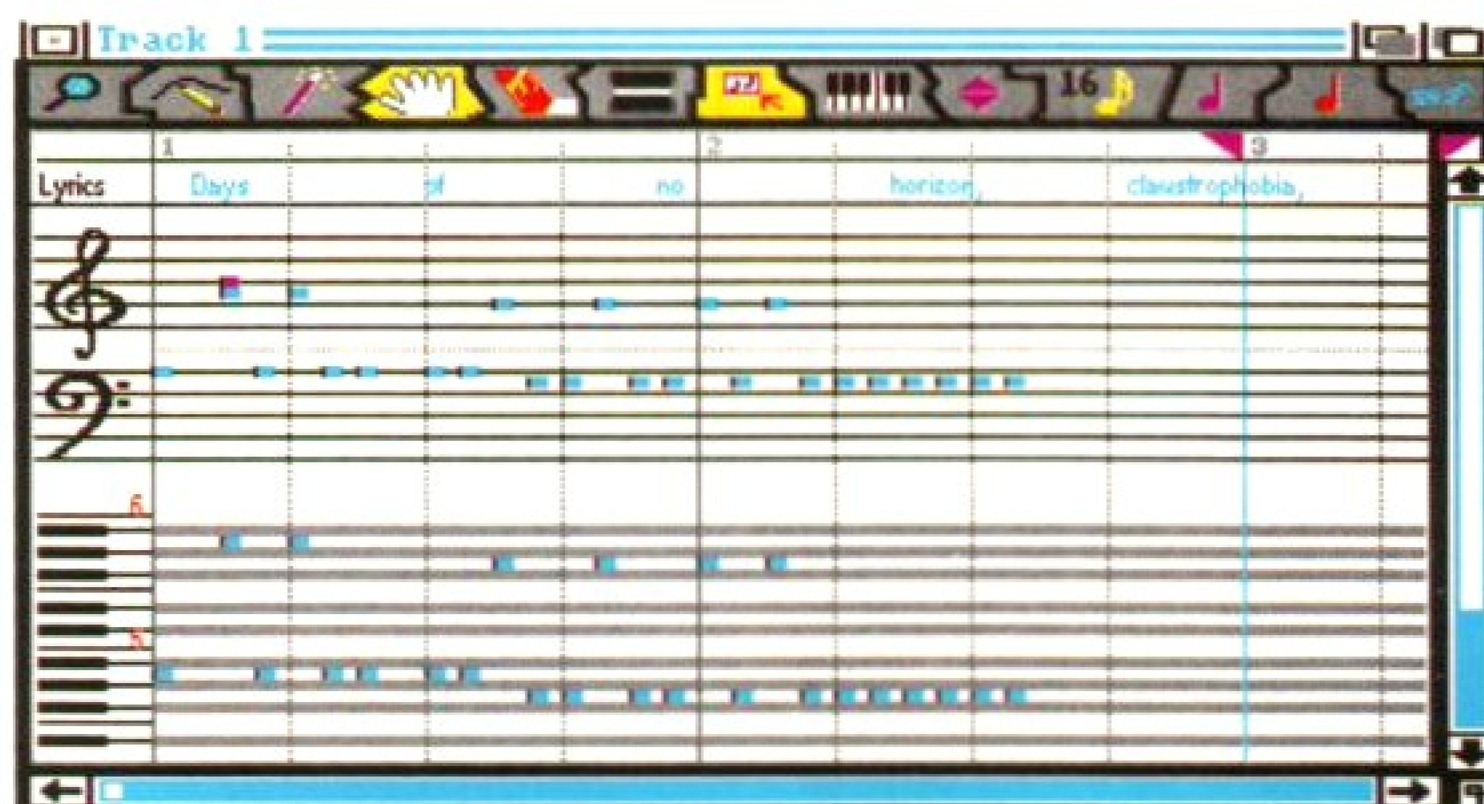
ABOVE: The main screen, showing all the track information, along with the MIDI muting and tape-recorder type 'transport' controls.

All the systems that control the passing of MIDI information use the pipeline. Effects such as soloing and grouping are carried out by simply turning taps on the output pipeline on and off, and other systems – called 'tools' – allow the user to affect the data being recorded and played back in other ways, such as quantisation, harmony generation or perhaps note transposition. By giving the user a separate pipeline both before and after the sequencer stage, MIDI data can be worked on at both input and output stages.

By placing systems of tools and joints along the pipeline, complex manipulations and routings can be carried out fairly easily. This leaves the musician free to concentrate on the music instead of having to wade through complex 'routing tables' found on many packages.

The Editor

Once the music has been recorded, it's time to iron out the glitches by entering the Editor Screen. This is done by simply double-clicking on the strip corresponding to the track you want to edit on the sequencer page. The display shown in the picture below will then confront you.



RIGHT: The Note Editing screen not only displays all the recorded notes, but also other data such as pitch-bending and even actual lyrics.

The top of the display is taken up by the editing options, including track information, edit data (writing notes, velocity info and so on), change data, grab and move, erase and mark area. Below this is a musical staff, displaying the recorded notes. For those who can't read music, a 'piano roll' display is also included, so the exact key positions can be seen.

From here the user can shift notes around, add and erase notes and even change such parameters as note velocity, modulation and pitch bending. To begin with, only the note information is displayed, so as not to confuse newcomers to sequencing.

For those who want a little more information, a menu can be pulled down allowing the user to display more information in the editing window. These include the usual items such as pitch-bend and aftertouch info, program changes and time signatures. Extra items such as key scales and rhythm data can be also be displayed – there's even an option to display lyrics! This is useful if you want to print out the information later for archive or study purposes.

All options must be taken one step at a time by selecting the appropriate command from the strip at the top, with the various functions having their own effect on the parameters to be edited. All the usual functions may be carried out on data for each track, or functions may be carried out on a number of tracks from the main sequencer page.

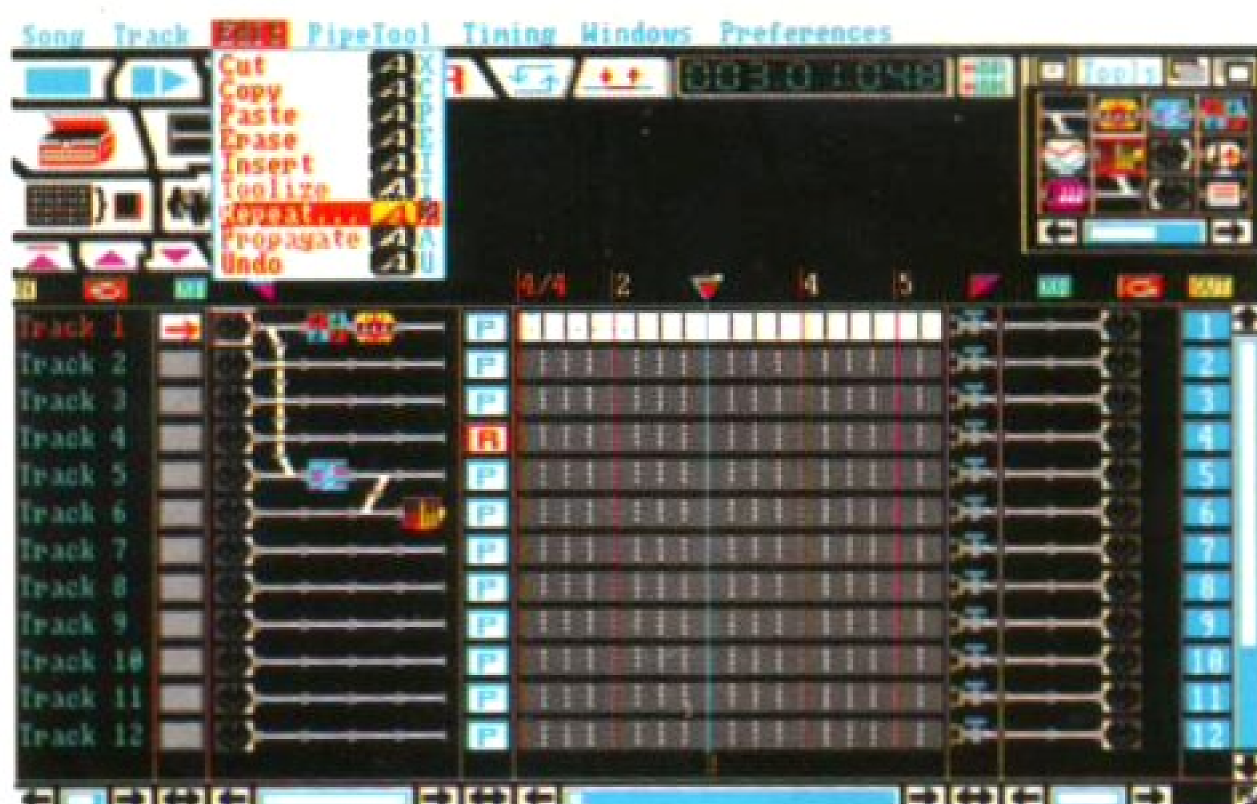
To begin with, using the editor can seem a fiddly and laborious process, since each command must be carefully carried out by using the correct options in the right places. For a beginner that hasn't fallen into the 'short cut' habit which may be used in higher-level packages, the system shouldn't prove too difficult to get to grips with, but those already familiar with sequence editing may get a little frustrated at times.

Unfortunately, this means that once you've passed out of the 'beginner' stage, you could find yourself outgrowing the editor system, which – to be honest – seems to be written for either the total numbskull or young children. Having said that, the jump between note-by note editing and the manipulation of other data is rather a hefty one and still requires some knowledge of the workings of MIDI instruments before any effective results can be gained.

Get Yer Tools Out!

The real power of *Bars and Pipes* revolves around the PipeTool system. The 'Toolbox' contains myriad options that can be placed in the input and/or output sections of the sequencer to alter the performance.

As well as systems of pipes that can be used to pass data between



ABOVE: Assemble the pipeline to produce some surprisingly complex recording effects, then edit the tracks as you wish.

tracks, other options can be used to change the data directly, either at the input stage, which affects information as it is recorded, or at the output stage, which leaves the recorded data untouched but affects the way the music is played. Effects such as echo and delay can be installed at either end of the pipeline, whereas other functions – like auto accompaniment – can only be used to change the recording of notes.

The basic tools on offer include all the basic building blocks needed to process MIDI data, such as quantising, articulation, note delays, chord inversion and keyboard spliting. By interconnecting these tools almost any effect can be produced.

Even if there isn't a tool in the toolbox that quite does the job you want, you can construct your own Macro Tools by connecting the standard pieces together to form your own system, which can be saved to disk for use at a later date. You can even design an icon for your tools to use in the pipeline.

For example: say you wanted to produce a tool to split the keyboard, quantise the notes being recorded and add a harmony. All you do is enter the Create-a-Tool window, place an input marker on the left followed by a split keyboard tool. Branch this off to a lower track containing a chord inverter and follow the keyboard splitter with a quantise tool and a counterpoint tool.

Now round it all off by sticking the appropriate output markers on the end and designing an icon for it. And there you have it! A Split-Quantise-Counterpoint tool with full chord inversion ready for you to stick in the pipeline! What could be simpler?





RIGHT: The Toolbox contains all the MIDI effects you could wish for, all ready to put in the data pipeline.

BELOW: But if you want a specialised effect, you can design your own 'Macrotools'.

Flowing Nectar?

For a novice embarking on a voyage of discovery in the land of MIDI, *Bars and Pipes* proves an excellent survival kit. The manual leads the user through step by step, outlining all the features in a clear concise manner. MIDI jargon is kept to a minimum, so as to aid comprehension, but doesn't descend into patronisation. This means that those with some knowledge of sequencers can get a fair amount of satisfaction from the program without feeling that the writers are looking down on them.

The program itself has a wide and useful range of features, with perhaps the simplest method of routing MIDI signals yet devised. This should cut down on the aggravation usually encountered when your carefully-composed masterpiece won't play because it's not connected to the right synthesiser channel!

Experienced musicians should note that the sequencer section has been specifically written with the beginner in mind and although learners will welcome the careful, step-by-step method of working, the editor could prove a shade laborious for those who know how to deal with writing on a sequencer.

So if you've just got that nice keyboard and would like to dabble in MIDI, but are a little wary of spending the high asking price of a high-end system like *Music X* due to the flabergasting array of controls, *Bars and Pipes* could be well be an alternative. Despite the expense this will prove to be a less confusing and altogether friendlier product – and that could well justify the cost. ■

BARS AND PIPES
£219.95 ■ 1Mbyte and MIDI interface required ■
Precision Software 081 330 7166.





MERLIN

NEW! AMIGA FLIGHT OF FANTASY PACK

ESCAPE REALITY WITH THE ALL NEW 'FLIGHT OF FANTASY' GAMES PACK!

Amiga A500 with Modulator, Mouse, 1 Meg Internal Disk Drive, 512KRAM, All Connecting Leads, Kickstart 1.3, 4096 Colours, Built-in Speech Synthesis, Multi Tasking, Workbench 1.3 System Disk, & Operation Manuals.

Plus... **FOUR GREAT SOFTWARE TITLES** F29 Retaliator, Rainbow Island, Escape from the Planet of the Robot Monsters, Deluxe Paint II

Fantasy at a Truly Realistic Price of Just... **£369**



MONITORS *Including FREE Amiga Leads!*

COMMODORE 1084S 14" Stereo High Res. Colour	PHONE FOR NEW LOWER PRICE!
COMMODORE 1084P Mono Sound Version of 1084S	£225
PHILIPS CM8833 14" Medium Res. Colour Twin speakers, Green screen switch, with tliting stand.	£249

CHECK FOR LATEST PRICES & AVAILABILITY ON ALL MONITORS

FREE...12 Months on site Maintenance with CM8833's

CM8833 TILT/SWIVEL STAND £9.95

DISK DRIVES

VORTEX 40Mb Hard Disk	£499
CUMANA CAX 354 1 MEG. 3.5" Single	£89
CUMANA CAX 1000 1 Meg. 5.25" Single	£129

NEW! Roctec 3.5" Drive Only...£85!

PRINTERS *Including FREE Amiga Leads!*

STAR LC 10 Mono	£169
STAR LC 10 Colour	£209
STAR LC 24 10	£249
STAR LC 10 MkII	£185

Genuine Star Ribbons now Available!

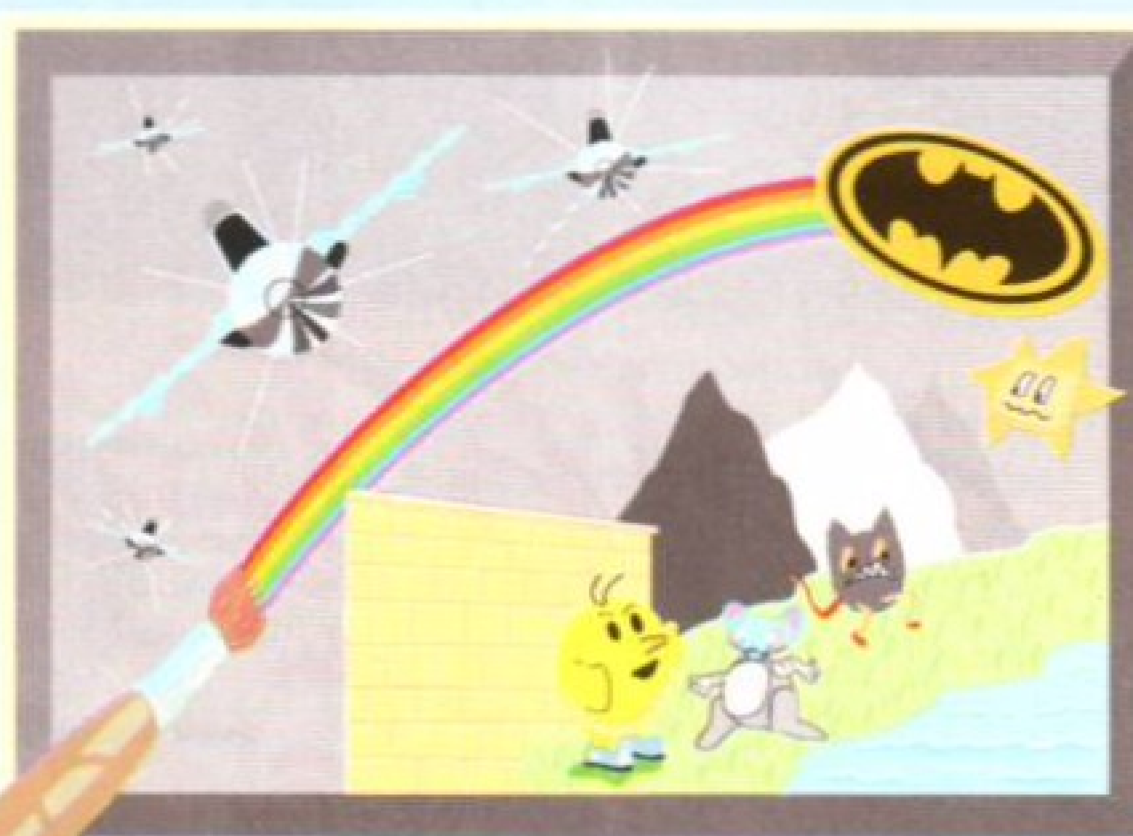
ACCESSORIES

10 - CBM OR TDK 3.5" DISKS	£14.95
DISK STORAGE BOXES... 40 Capacity	£6.95
80 Capacity	£8.95
MOUSE MATS	£4.95
AMIGA KEYBOARD DUST COVERS	£5.95
STAR PRINTER DUST COVERS	£5.95
CM 8833 DUST COVERS	£5.95

MORE AMIGAS

AMIGA Class of the 90's Pack	£529
AMIGA Comp. Pack* + CM8833	£608
AMIGA Comp. Pack* + CM8833 +Star LC10 Colour Printer	£809

* Either Flight of Fantasy or Batman Pack



AMIGA BATMAN PACK

Amiga A500 with Modulator, Mouse, 1 Meg Internal Disk Drive, 512KRAM, All Connecting Leads, Kickstart 1.3, 4096 Colours, Built-in Speech Synthesis, Multi Tasking, Workbench 1.3 System Disk, & Operation Manuals.

Plus... **FOUR GREAT SOFTWARE TITLES** Batman, F18 Interceptor, New Zealand Story and Deluxe Paint II

The Ultimate Movie, The Ultimate Game, The Ultimate Price... **£369**

CHOOSE ONE OF OUR 3 SORCERORS PACKS!



MOUSE MAT, DUST COVER, LOCKABLE 80 CAPACITY DISK STORAGE BOX 10 BLANK DISKS & JOYSTICK



COMMODORE BARREL BAG & DISKETTE HOLDER, + COMMODORE KEYRING.



COMMODORE - QUARTZ ANALOGUE SPORTS WATCH, MUG, KEYRING, BALLPEN AND SOLAR POWERED CALCULATOR

CHOOSE AN AMIGA FLIGHT OF FANTASY OR BATMAN PACK (As listed above)... *Plus* Your pick of any 1 Sorcerors Pack from the three detailed here for Only... **£394**

(Individual Sorcerors Packs [ie without the A500] are available to purchase depending on our stocks, phone for prices and further details quoting the relevant SC number)

Inclusive of VAT and Postage!

24 HOUR HOTLINE 0602 42-44-44

ALL OUR PRICES INCLUDE V.A.T. AND POSTAGE (UK Mainland)

Whilst every effort is made to ensure that the information shown on our advertisements is correct, you should ALWAYS confirm any Offers, Prices, Availability etc. prior to placing orders. Because our advertising is booked so far in advance, Merlin reserve the right to alter equipment specifications, withdraw any product/offer or update prices (either up OR down), without prior notice. ALWAYS CHECK DETAILS PRIOR TO ORDER. Merlin will NOT supply anything that has been subject to change without the customers prior permission.

ORDERING: **Just phone our 24 hour order line using your Access/Visa card, OR, send a cheque/postal order with your requirement details. (Cheques need clearance prior to despatch)**

DELIVERY: **You choose either, by post at no extra cost, or simply add £5 per large item for next working day courier service. (UK Mainland)**

WARRANTY: **Goods that prove faulty within 30 days will be exchanged for NEW. After 30 days, & within 12 months, faults repaired at our expense.**

MERLIN EXPRESS LIMITED

DEPARTMENT AMF/T5, UNIT D9. THE ROPE WALK INDUSTRIAL CENTRE, OFF STATION ROAD, ILKESTON, DERBYSHIRE, DE7 5HX. TELEPHONE: 0602 441442

GREAT VALUE, THAT'S THE MAGIC OF MERLIN

E & O E

ALL our currently advertised offers supersede any previously advertised offer(s)





On Getting Back to nature



Capturing the essence of the natural world is the aim of the *Real Things* series. **BRIAN LARKMAN** flies with the Birds.

The way things move in nature is, at the same time, very easy and very hard to understand. Everyone knows that a bird flies by flapping its wings and a wave moves towards the shore although the water stays in near enough the same place, bobbing up and down. Yet if you devote any time to observing such dynamic processes in detail you realise that in fact they represent a complex interplay of forces that can produce an almost infinite variety of movement patterns.

Real Things – Birds comes close to making these forces understandable by bringing them into your Amiga and encouraging you to experiment with them for yourself.

Perhaps the best way to gain a real and intutive understanding of natural dynamics is to draw them. Only by the trial and error of drawing – exact observation combined with a spontaneous expression of thought and eye on paper – only by this gradual evolution of skill can you make real for yourself the spirit and atmosphere of a birds wing in flight or the curl of a wave.

The movements and gestures that you are forced to make to capture these natural shapes onto paper are themselves very like those actions in miniature, so by the act of drawing you are 'going through the motions' of flapping a wing or curling a wave.

No Natural Talent?

So how could someone with little artistic skill experience even a small part of this personal way of seeing and understanding – and at the same time convey their vision to others? Well, as an amateur artist you may have conjured a pleasing shape for yourself that might nevertheless look like a crude scrawl to an observer, conveying nothing of the natural flow.

A skilled artist can express the spirit of motion with a flowing line or a splash of colour drawn from an inner comprehension, but even that can only be conveyed to others as a frozen moment, to be viewed as an illustration in a book or a picture on a wall.

Film or video, or even traditional animation, can show the movement, but these are not available to most artists and cannot easily be examined (manipulated, edited, frozen or accelerated). In any case a still photograph, or even a film or video, is perversely too static, too rigid for the observer or the artist to become really involved. So what can be made of the new medium, computer animation?

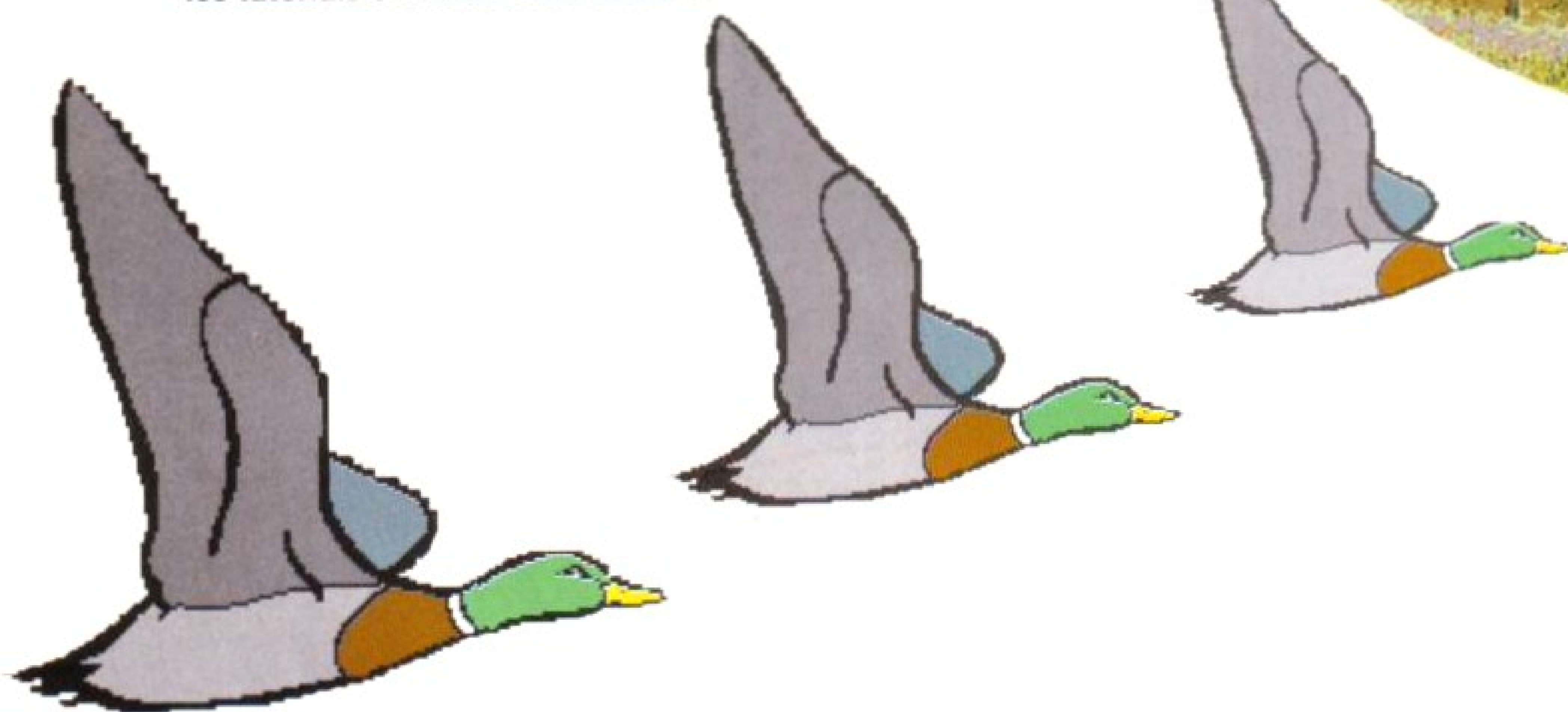






ABOVE: SANTORINI STORKS The undeniably static nature of magazine illustrations makes it very difficult to convey the quality of a moving animation. *Amiga Format* has a bit of an edge, however, with its Coverdisk. Two months ago we featured the Storks in this picture so, if you bought Issue 10, you may know what these must like flapping.

Here they are shown in hi-res with a version of one of the pictures from the digitising tutorial from Issue 11. We are true believers in recycling, as you can see! The conversion from 32 colours has reduced the quality of the foreground buildings but otherwise the *Real Things* brushes look very good. All the processes involved in changing from lo- to hi-res have been described in some detail in the graphics tutorials of the last few months.



ABOVE: KESTREL Of the hi-res pictures featured here this has suffered most from the reduction from 32 colours, though the image is still vibrant and realistic. The single shade of red used does not do justice to the original which had seven shades.

THE ARTIST AND HIS WORK





Although most of the backgrounds, scenery brushes and animbrushes and all of the astonishing evocations of moving water were produced by Robin Bilson, the main bird illustrations have been created by the prominent wildlife illustrator Peter Partington.

Most of his normal illustrative work has been in watercolour, a medium which allows the "jizz" or character of a bird to be expressed quickly and easily as a 'calligraphic' stroke reminiscent of Japanese written characters. Transferring this style to a computer seems to have worked well, for the broken edges of 'stepped' computer marks are in some ways similar to the accidental imperfections that give a natural strength to watercolour strokes. A computer is obviously much less spontaneous than watercolour, but the animations and animbrushes produced by Peter Partington for *Real Things – Birds* still convey the spirit and atmosphere of living birds in their natural setting rather than the exact scientific positions of every feather that more technical illustrations might contain.



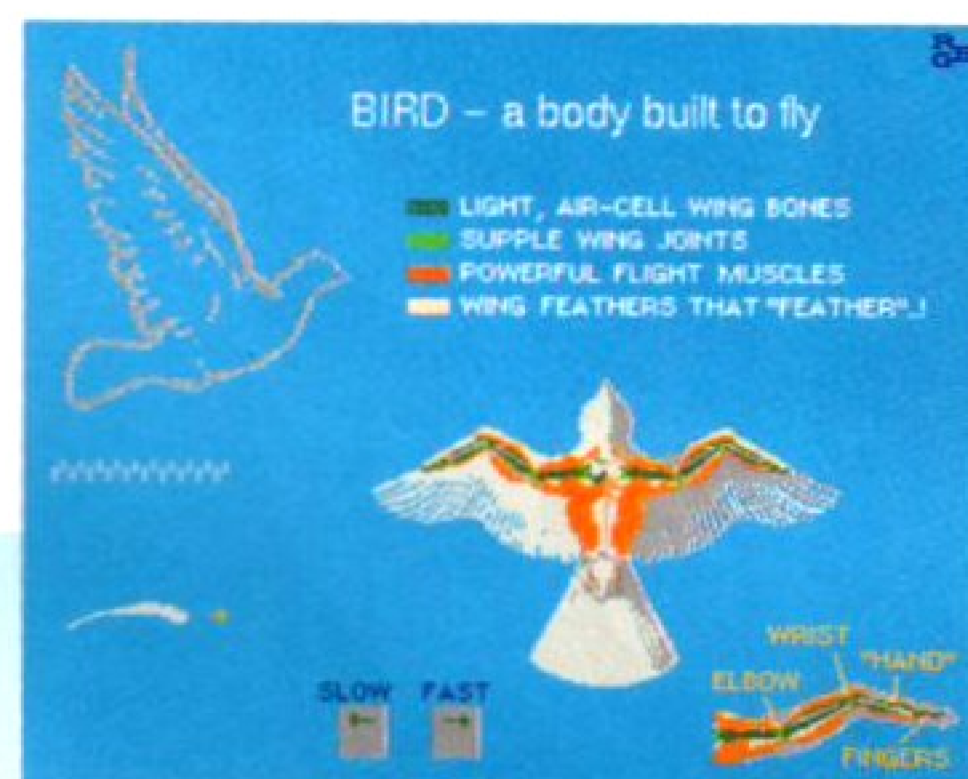




ABOVE: LAKESIDE Movement in nature is not confined to animal motion, as a moment spent on a riverbank or seashore will prove. Like the activity of birds, water has a limited repertoire of basic movements that can be varied and combined into an infinitely-changing spectacle.

To accompany the *Birds* – which are predominantly, though not wholly, water species – Robin Bilson has provided several animbrushes, with instructions on how to use them, that allow an astonishingly vivid and accurate portrayal of water in motion.

In this illustration, gentle up and down ripples give the water a convincing liquid quality. The birds also are frozen in flight, but something of their quality can still be picked up.



ABOVE: ANATOMY This 'moving' picture illustrates "How Bird Flight Works". It is quite obvious when you see it!

Naturally Dynamic

The *Real Things* series is so far the only product available for the Amiga – or any other computer, as far as we know – that will allow anyone to examine and experiment with the dynamics of natural movement. The really difficult job – that of capturing the detailed motion patterns of nature, horses, birds and water so far – has been taken care of by the RGB Studios artists. Nevertheless, plenty of the work has been left up to you, so that in creating a particular scene you gain a degree of intuitive understanding.

Natural Structure

Like *Real Things – Horses* before it, *RT – Birds* is structured hierarchically, providing simple tutorials and basic outline animbrushes to get started with, and more complex advanced material for those with more skill. The most important dynamic process – 'How Flight Works' – is also graphically explained in an animated illustration. If all this seems too 'educational', do not be put off, for *Birds* is real fun to play with whatever your skill level.

Although following the general pattern set by *Horses*, by contrast *Birds* provides a lot more material and seems more polished and even more 'real'. There are animbrushes of 12 species, about 40 in all, plus both static and animated backgrounds and foregrounds. All the images are generated by professional artists directly on the Amiga without using digitising.

The main reason for this is to eliminate the detail "twittering" and edge wobble that is always present with digitised animbrushes (caused by variations from frame to frame). The animbrushes are also "pixel simple": in other words, wherever possible flat colour is used rather than dithering. This gives you more frames for your memory and therefore larger anims and smoother action.

Everything is rendered in lo-res, but if you have a fat Agnus chip and some extra memory all the animbrushes work in hi-res, where they look superb despite the reduction in the number of colours available. Most of the illustrations shown here were produced in this way and give a flavour of what is possible with a bit of palette-swapping and remapping. Nevertheless the software was designed to be used in lo-res and it is here that the full colour shows off the artist's work to greatest advantage.

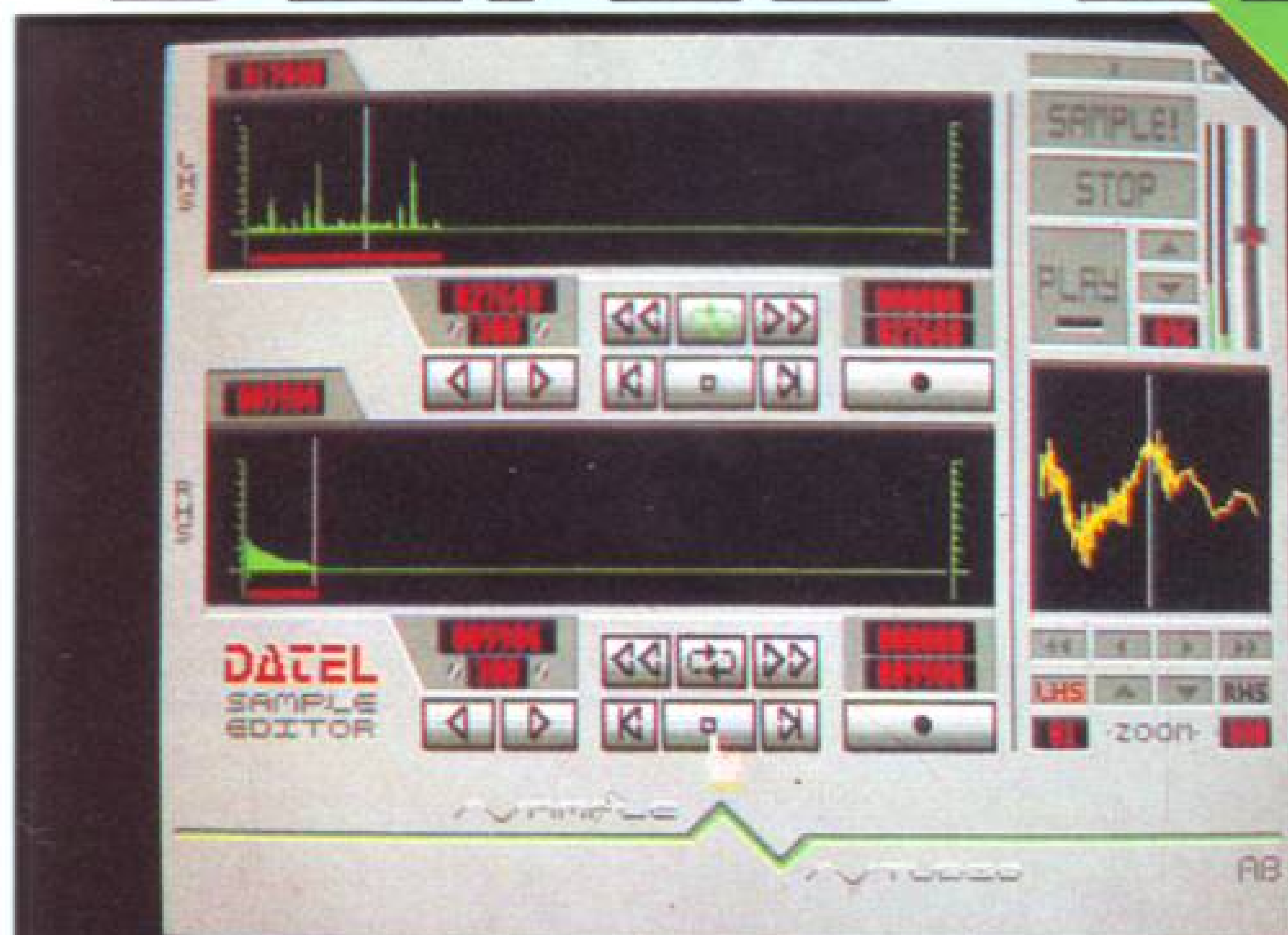
Naturally, It's Different

If this review seems quite different from others that have appeared in the Graphics Section it is because *Real Things* is itself quite different. It is one of the few examples of leisure software that does not treat the Amiga as if it were a prop for some past view of the future, but rather uses it as a means of doing something NOW that no other artistic medium can achieve. The computer becomes 'transparent' in the light of 'what it can do'. In many ways it is a product that will appeal to a very different type of Amiga user; possibly it will lure a whole new, maybe older, generation of people into using a computer and more women, too.

REAL THINGS – BIRDS
For use with *Deluxe Paint III* ■
£29.95 ■ RGB Studios 082 581 2666

DATEL ELECTRONICS

STEREO SAMPLING





AMIGA PRO SAMPLER STUDIO + DATEL JAMMER

- A top quality stereo sampling system at a realistic price.
- 100% machine code software for realtime functions.
- HiRes sample editing.
- Realtime frequency display.
- Realtime level meters.
- Files saved in IFF format.
- Adjustable manual/automatic record trig level.
- Variable sample rate & playback speed.
- Separate scroll line waveform windows & zoom function with Edit windows for fine accurate editing.
- 3D shot of sound waveform. Wave editor to design your own waveforms or adjust existing ones.
- Microphone & line input 1/4" Jack & Din connections.
- Software files can be used within other music utilities.

ONLY £79.99 PLEASE STATE A500/1000/2000

TO COMPLEMENT THE SAMPLE STUDIO THE DATEL JAMMER GIVES YOU A 5 OCTAVE KEYBOARD TO PLAY & RECORD YOUR SAMPLED SOUNDS

FEATURES:-

- 4 track sequencer up to 9999 events.
- Tempo & Beat controls.
- Mixer Controls on Instruments.
- Load & Save sequence.
- Works on standard IFF file sounds.



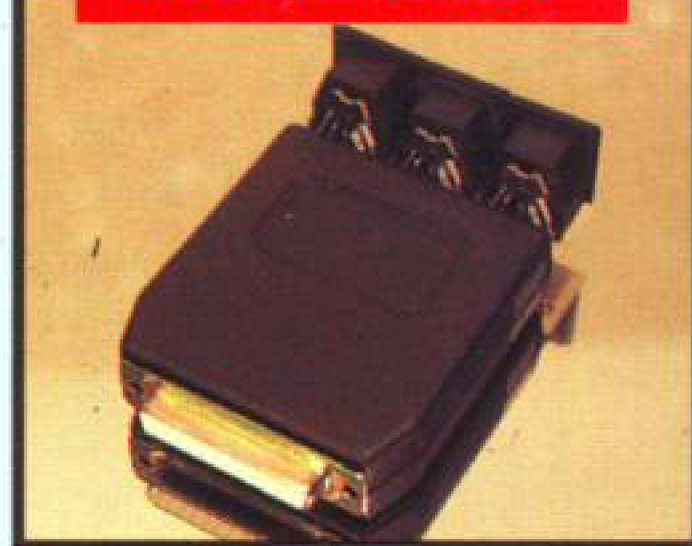
MIDIMASTER



- Full Midi Interface for A500/1000/2000 (please state model).
- Compatible with most leading Midi packages (including D/Music).
- Midi In - Midi Out x3 - Midi Thru.
- Fully Opto isolated.

ONLY £34.99

MICRO MIDI



- A simple low price Midi Interface for the A500.
- All the features found on more expensive units. Fully compatible.
- Midi In - Midi Out - Midi Thru.
- Fully Opto isolated.

ONLY £24.99

VIDEO DIGITISER



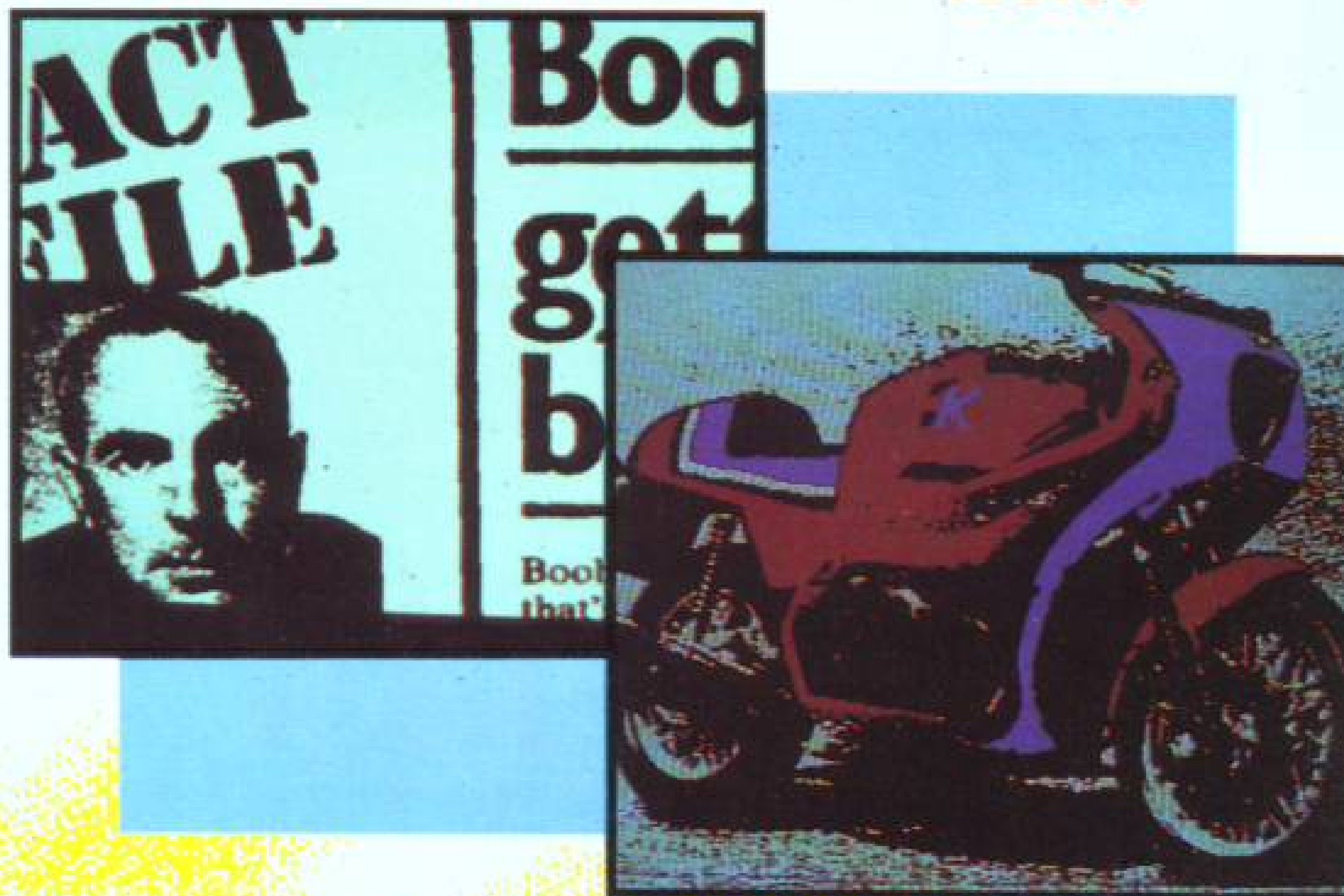


- 256 x 256 display with 16 grey levels.
- Realtime frame grab 1/50th second.
- Takes standard composite Video input from camera or Video recorder.
- Screen update 1 frame per second, single, continuous or buffered display.
- Load, Save facilities including IFF Save.
- Edit picture, cut, copy, paste and undo.
- Special effects, reverse, negative, mirror, compress, etc.
- Increase the width of the display to 320 x 256 automatically or manually.
- Plugs into the parallel port of your Amiga 1000/500/2000.
- Comes complete with its own power pack.

ONLY £89.99

GENISCAN GS4500 AMIGA





- An easy to handle Handy Scanner featuring 105 mm scanning width & 400 dpi resolution enables you to reproduce graphics & text on your computer screen.
- Adjustable switches for brightness & contrast levels. Printout for Epson compatibles.
- A powerful partner for Desk Top Publishing that allows for cut & paste editing of images etc..
- With Geniscan you have the ability to easily scan images, text & graphics into the AMIGA.
- Save images in suitable format for most leading packages including PHOTON PAINT, DELUXE PAINT, etc.
- Package includes GS4500 scanner, Interface & Scan Edit software.
- Unmatched range of edit/capture facilities simply not offered by other scanners at this unbeatable price.

SPECIAL OFFER
COMPLETE WITH PHOTON PAINT
FOR ONLY £169.99
INCLUDING HARDWARE/SOFTWARE



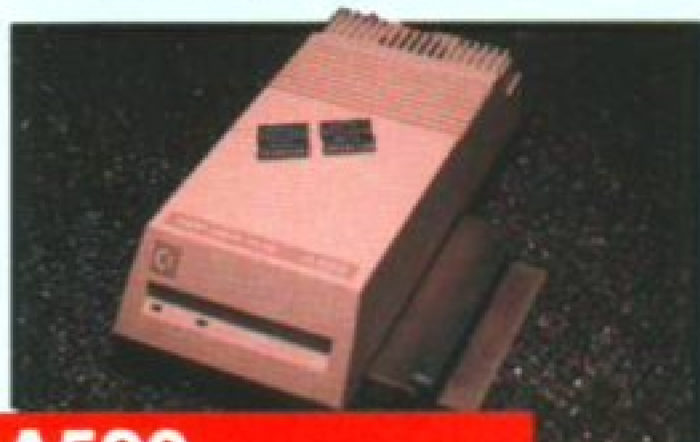
DATEL ELECTRONICS

EXTERNAL 3.5" DISK DRIVE

- Slimline extra low profile unit - very quiet!
- Top quality fully compatible drive mechanism.
- Throughport allows daisy-chaining other drives.
- A superbly styled case finished in Amiga colours.
- 1 meg unformatted capacity.
- Good length cable for positioning on your desk etc.
- Comes complete with it's own On/Off switch.

NEW LOW PRICE ONLY £74.99





A590 UPGRADES

- If you own an A590 Hard Drive, then you can upgrade it to give up to an extra 2 Megs of Ram to your system.

ONLY £69.99 FOR 512K (0.5 MEG)
ONLY £134.99 FOR 1 MEG
ONLY £259.99 FOR 2 MEGS



QUICKSHOT TURBO

- Plugs straight into your computer.
- All the features of the best selling Quickshot II plus:-
- Microswitch action for even longer life.
- Extra rugged construction. Superb styling.

ONLY £9.99 COMPLETE



512K MEMORY EXPANSION

- Now with this superb 512K Expansion unit tyou can simply plug in more memory. Bring your Amiga up to 1 Meg Ram in seconds!!
- Featuring the latest 1 Meg Fast Ram chips.
- Comes complete with dissable switch (not offered by some others, including A501 unit).
- Available with/without clock/calendar feature. Clock version has high capacity NiCad battery - never needs replacing!
- Low chip count means extra low consumption.
- High grade PCB with quality connector.
- Buy direct from the manufacturer and SAVE!
- Simply plugs into internal Ram extension slot - no knowledge at all required.

ONLY £69.99

ONLY £84.99
FOR VERSION WITH CLOCK/CALENDAR COMPLETE

ACCESSORIES

AMIGA CENTRONICS PRINTER LEAD £6.99
3.5" DISK HEAD CLEANER £3.99
A/B/C PRINTER SWITCH BOX £19.99
6" LONG MOUSE/JOYSTICK EXTENDER LEAD (DOUBLE) £4.99
100 x 3.5" DISK STORAGE BOX £8.99
25 x 3.5" D.S.D.D. DISKS ....ONLY £19.99

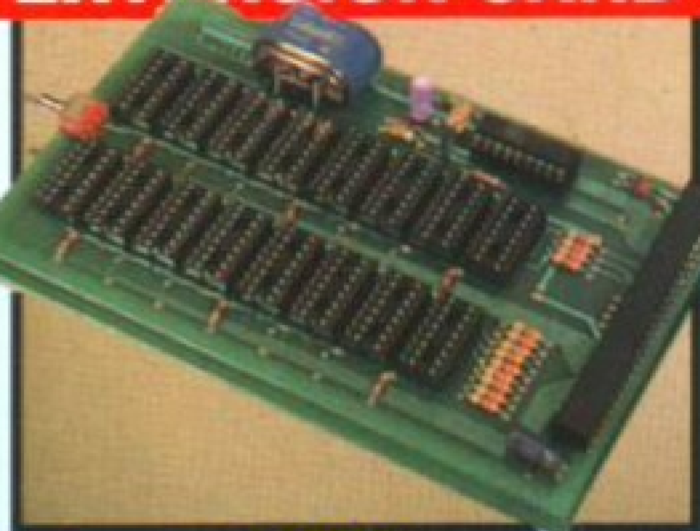
ICON PAINT



- A unique product to edit and produce your own individual icons.
- Allows for multi-colour (up to 16) extra large icons for use when customising workbench, disk, icons, tools, programs, etc.
- Advanced editing facilities make for fast and easy design.

ONLY £12.99

512K RAM EXTENSION CARD



- If you can obtain your own Ram chips, we can supply the card.
- Accepts 16 x 41256 D Rams.
- Available with/without clock option.
- Switch dissable feature.
- Simply plugs into Ram expansion slot.
- Fitted in only minutes - no user knowledge required.

ONLY £19.99

ONLY £34.99
FOR VERSION WITH CLOCK/CALENDAR

N.B. THESE PRICES DO NOT INCLUDE RAM CHIPS



REPLACEMENT MOUSE

- High quality direct replacement for mouse on the Amiga.
- Teflon glides for smoother movement.
- Rubber coated ball for minimum slip.
- Optical system counting - 500/mm.

Special offer - free mouse mat + mouse house (worth £7.99).

ONLY £29.99
COMPLETE

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY 0782 744707
TECHNICAL ONLY 0782 744324

VORSPRÜNG DÜRCH DAS COMPÜTERGAMENSPIELENZ

SCREEN PLAY

THE RATINGS EXPLAINED

GRAPHICS
Good graphics are an important part of any game: if the power is there, it should be used to the full. Both static and moving graphics come under scrutiny in this rating, but remember, graphic wonders alone do not a great game make...

SOUND
With stereo capabilities the last thing you want to hear are Spectrumesque beeps, right? Title tunes and effects all add to the atmosphere of a game and good sound can greatly increase your enjoyment.

INTELLECT
How much real thought do you have to put in to play the game? Just because a game is mindless doesn't necessarily mean it's bad, but a game with a high intellect rating says immediately that you'll need to think to gain maximum enjoyment.

ADDICTION
How easy is a game to pick up and play? How much sheer fun will you get from it? Will you keep coming back? Important questions, all answered by a quick look at the Addiction rating.

OVERALL
A percentage mark that takes into account all the ratings, plus extras like lasting interest, documentation and packaging.

THE TEAM
There are two main *Amiga Format* reviewers: Andy Smith is an ex Spectrum owner who's been playing computer games for many years now and writing about them for almost as long, cutting his teeth on *ACE* before moving onto *Amiga Format*. Andy likes any type of game, from shoot-em-up to strategy game, from adventure to arcade conversion.

Maff Evans joined *AF* after doing sterling service for *Zzap! 64*, and he splits his time between playing games and writing reviews for us and our sister magazine *ST Format*. He's another solid all-rounder who's not averse to giving Andy the odd high score contest on the best games.

AS COLD AS ICE











The actions screen where you decide what your character should do – ski in this case

MIDWINTER

RAINBIRD £24.95 ■ Mouse, Joystick or Keyboard

The year is 2099 AD. The world was devastated some 60 years previously when a strike from a massive meteorite affected the global climate and sent the world into a new Ice Age. Continents collapsed, millions died and it was clear things would never be the same again.

Some thirty years ago a bunch of people discovered an ice-covered island and started settling the place. Life was far from easy, but by sinking heat mines it became bearable and the inhabitants of what became known as Midwinter Isle struggled on.

It soon became apparent that Midwinter was, the last habitable place on Earth and the leaders of the isle got together and formed the Free Villages Peace Force (FVPF), to ensure things stayed free and safe. New settlers who through luck or careful planning managed to find their way to Midwinter were welcomed and integrated into the island's system.

In the last few years, though, some of the newer members have become disgruntled with their lot. The leader of the FVPF, Captain John Stark, decided to let things ride... and disaster struck.



Every character gets his or her own personal details screen, which it's important to look at when deciding what they should be doing.

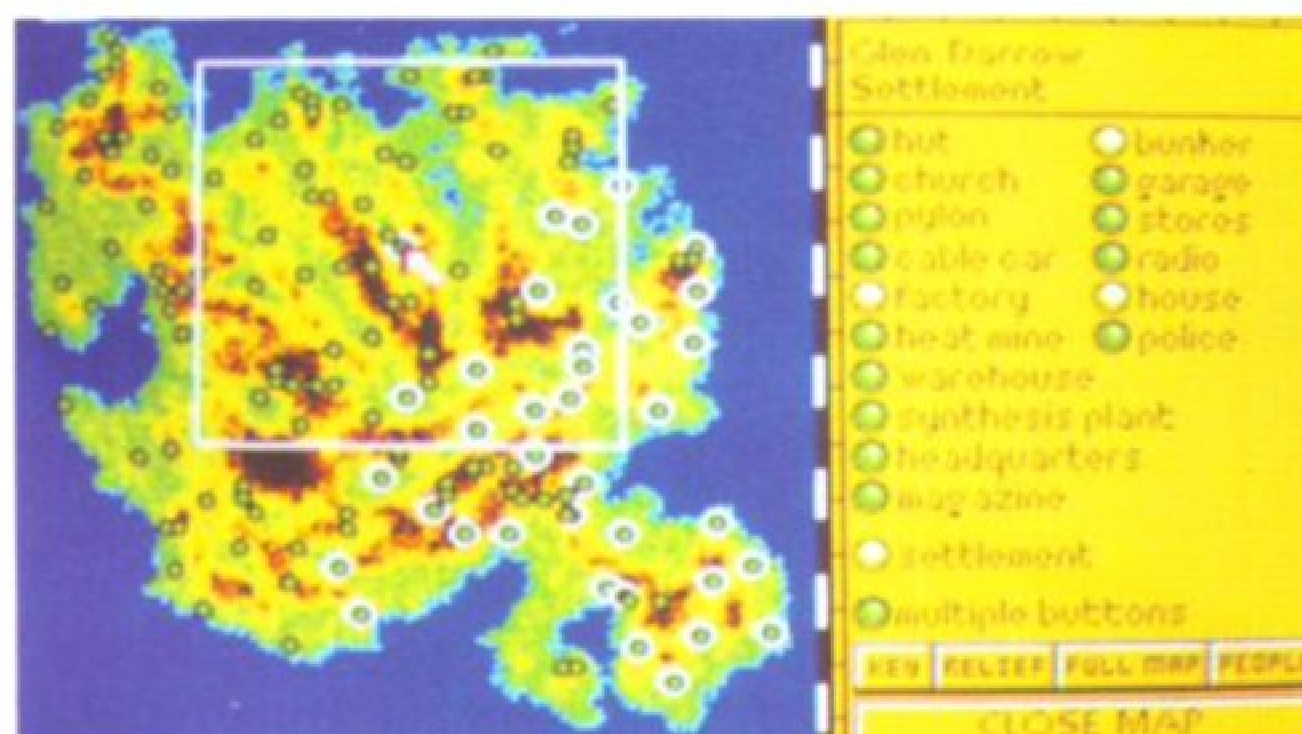
A rebel army, led by General Masters, is now on the march and intent on taking over the whole island. You, as John Stark, must rally your forces and prepare to defend the island...

Midwinter is a one-player strategy game featuring light-sourced 3D graphics and a game area of 160,000 scale square miles. There is a total of 32 characters in the game who can be rallied to your cause. To find out where these people are and where General Masters' armies are, a map can be called up at any time. Then the only problem to deal with is getting to them.

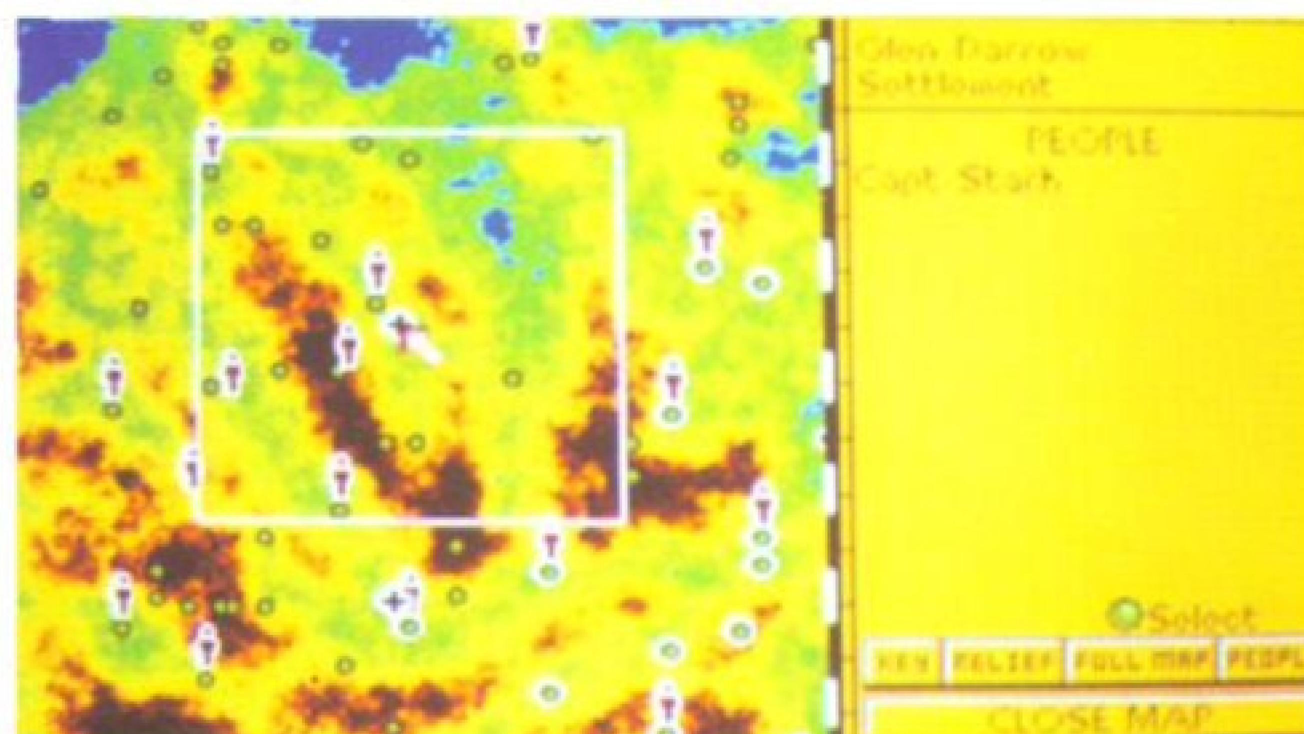
There are four methods of transport on the island: travelling from two fixed points in the cable car, hang-gliding from the top of high ground or – the two most common methods – in snowmobiles or on skis. Snowmobiles can only be picked up from settlements with a garage but you can ski anywhere. There are dangers to all methods of transport and it's highly likely you'll take a tumble, but this is less serious when you're skiing than when you're hang-gliding or driving a snowmobile.

After a hard journey, taking breaks to restore energy when necessary, you make it to your destination and put your case to anyone who'll listen. If you're lucky you'll gain a recruit. This is by no means guaranteed because, like any community, there are some people who will do favours for others and some who won't.

All those you do manage to recruit need to be controlled by you, though, and as the game is time based there are two watches to keep your eye. There's a team watch and a personal watch. You don't want to see 10 people sitting around doing nothing while you concentrate on one person, so every character has two hours of game time in which to act before watches need to be synchronised with the team watch and everyone's two-hour period starts again.



Midwinter Isle. You're somewhere around the middle-ish of the map. At the moment 'settlements' is the option you have selected, but if you're looking for the nearest comrade...



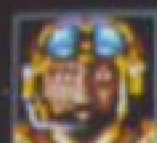
...hit the 'people' button and the display changes to show you where they are. Prof Kristiansen could be a big help in recruiting others if you can get him to a radio station, so let's go find him.

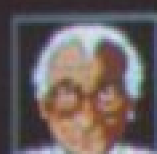


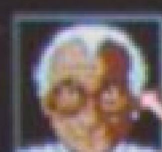
Not very far along the road and an enemy patrol is spotted – switch to snipe mode and blow them away.

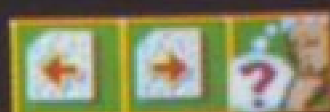


And here's Kristiansen's hut. Let's hope the Prof's in.









Well, Professor Kristiansen is indeed at home, but he's not coming round to your way of thinking. That's a bit of a blow.

For example, you send person A to a particular village to meet person B. Person C, meanwhile, goes to meet person D. You control A on his mission for two hours, then switch control to C for two hours. In effect you have controlled both, simultaneously, for the same two-hour period. After these two hours, A and C will be back on the same time, so watches can be synchronised and you can start again.

When the enemy are discovered they should be engaged. If you're travelling somewhere you can enter snipe mode when skiing or chuck some missiles at them from your snowmobile. At any rate, try to destroy as many of them as you can, but always remember that the enemy forces will be shooting back!

Rally your troops, destroy the enemy and when you're ready launch a counter-attack on the enemy HQ. Succeed and Midwinter Isle will once more be safe: take too long, though, or let the heat mines fall into enemy hands, and it's curtains for you and your people. ***Andy Smith***

GRAPHICS	**8**
SOUND	**6**
INTELLECT	**7**
ADDICTION	**9**
OVERALL	**92%**



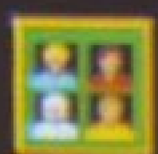
Back to the skiing and you've been spotted by another patrol, who very ungenerously decide to fire homing missiles at you.

GRAPHICS AND SOUND

The sound effects are good, as are the graphics. Everything is well drawn and the 3D moves swiftly, although it can be difficult on occasion to judge the landscape when you're skiing or driving. Generally, the audio and visual effects are of a satisfyingly high standard.

LASTING INTEREST

This will take you absolutely ages to play: fortunately there's a game save option. Just trying to get started is tough, so you'll really need to concentrate and use your resources to their best advantage to gain a victory. It's compulsive stuff, so once you start you'll enjoy every minute.





Two hours have passed so it's time to synchronize watches and get a report on how well the war's going.

JUDGEMENT

Well, it's finally made it. *Lords Of Midnight*, the greatest ever game by Mike Singleton, author of *Midwinter*, has arrived on the Amiga, albeit under a different name and with a whole host of improvements and updates. *Midwinter* is the '90s *LOM*, a sugar-coated wargame with the pace set at just the right level for the player not to realise he's playing such a complex strategy game. *Midwinter* is a superb game to play and a must for anyone who wants to immerse themselves in a thoroughly believable game world. Playing properly, ie allowing the enemy to have mortars and bombers, you'll find this an excellent game: but note, there is one way to complete the game extremely quickly. The quick route is a lot like cheating, so bear that in mind, but if you're prepared to play the game properly and win convincingly you'll enjoy it immensely.

Catching a cable car across mountain ridges reduces the risk of injury and provides Cap'n Stark with a chance to catch his breath.

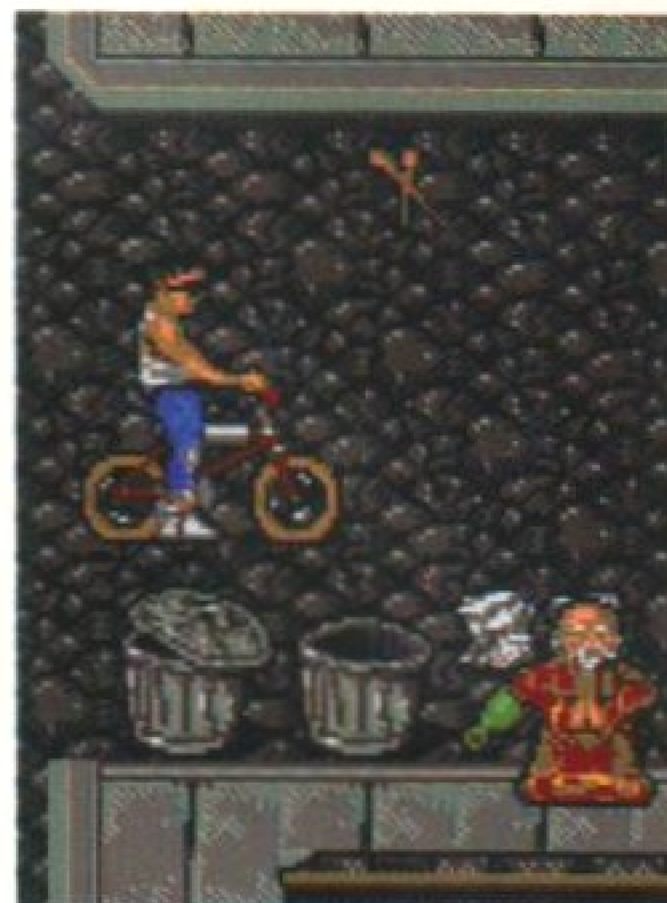




Performing a stunt to earn extra dosh. That banknote fluttering along in the air might turn out to be useful too.

LASTING INTEREST

The first level is easy enough to complete, getting you nicely into the feel of the game, but from the park onwards things tend to get a lot tougher. You can choose to pick up the game from the start of the last level if you wish, which is a handy little facility and is bound to be well used. The superb graphics of each level will keep you playing "just to see what the next level is like!" The choice of control methods is another nice touch, allowing you to find out which manner of play suits you best so you can choose to play in that mode.



Pick up and deliver those chopsticks for an extra bonus.

SKIDZ

GREMLIN £19.99 ■ Controls

GRAPHICS AND SOUND

Skidz's graphics perfectly capture the mood of riding and skating around the streets, even down to the skateboarder's way-out clothes. The sprites have a marvellous cartoon-like appearance, especially on some of the characters around town – the mad workman with the pneumatic drill is well worth looking out for! The background graphics have an individual atmosphere on each level, from the cobbled streets and canvas huts of Chinatown to the muddy wastes and heaps of bricks found in a building site – everything is loaded with atmosphere. The sound is rather jolly too, consisting of an up-beat hip-hop tune backed up with lively vocal samples and solid effects, but I can't help thinking that a mad guitar thrash track would have fitted better!

No-one likes to live in a town strewn with litter, but just try rounding people up to do something about it. This is the situation in Gremlin's *Skidz*.

Your local townsfolk are an extremely messy lot, dropping cans, bottles and pieces of paper all over the place. Despite concerted efforts nobody will get down and clear it up, so you must take to the streets and clear them up for yourself.

You can ride either your skateboard or BMX bike through the town to carry out the task you have set yourself, which is to pick up at least 75% of the litter in each of the town's messiest sections. Ten pieces of rubbish can be picked up before your arms are full, at which point you must deposit the bits in a trashcan before any more can be collected.



Are you really ready for a race? Well, go for it anyway!

Throughout the town, evidence of neglect can be seen, such as potholes, broken walls and dicarded boxes. All these obstacles must be avoided, since falling off your mount depletes your energy supply. Extra energy can be gained by picking up useful items around the town, or by spending money in the Ride 'n' Skate shop (which doesn't seem to sell any trendy clothes, unfortunately for you hip skaters).

Money is gained by performing stunts off the ramps or by picking up dosh dropped by particularly negligent townsfolk. Don't hang about though, as there is a clock counting down, which heralds the appearance of the scrap spirit, who whizzes around you draining all your energy in an attempt to keep the mess he likes gatherered around him.

Bonus points are awarded for completing set tasks on each level. For example, finding and delivering a parcel, feeding the fish in the park or delivering the paper to the workmen on the building site. This is the only time that the town's inhabitants are co-operative, as for the rest of the time they just hang around getting in the way. Awkward bast... er... awkward people! ***Maff Evans***



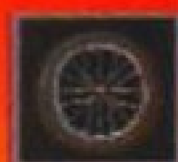
It's a straightforward race! Go! Go! Go! Go for the tape!

GRAPHICS	9
SOUND	7
INTELLECT	3
ADDICTION	8
OVERALL	86%

JUDGEMENT

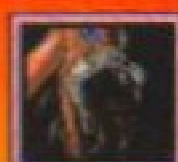
It's been a while since such a straightforward 'fun' game has appeared on the Amiga; especially one that looks and sounds as good as *Skidz*. The appeal of the game is bound to spread beyond the die-hard skateboard and BMX fans, since the game has obviously been written with a sense of humour, especially when from a gate reading 'Beware – Beast!' wanders a little brown mongrel! If this is in tune with your sense of humour and po-faced shoot-em-ups seem a little dull these days, then get your most colourful shorts on and have a bash at *Skidz*.

IN THE SHOP



Replace any damaged wheels with a new set on your BMX

Cost - $50



New bike brakes for quicker deceleration

Cost - $30



Repair kit for patching up damaged bike wheels

Cost - $10



Helmet to reduce the ammount of energy lost in collisions

Cost - $90



Water bottle for an extra few units of energy

Cost - $20



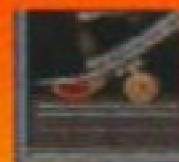
Buy a medical kit to completely refresh your energy supply

Cost - $50



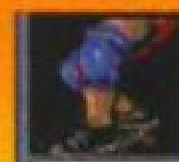
Replace damaged runners with new skateboard wheels

Cost - $50



Fit brakes to your board with a stopper pad

Cost - $30



Knee pads help to cut down on energy loss

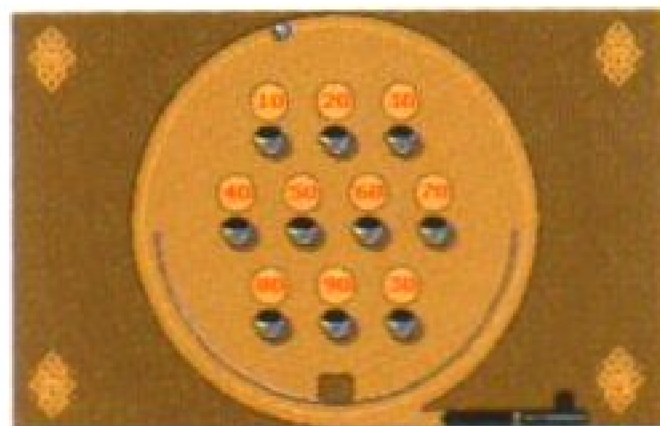
Cost - $40

THEME PARK MYSTERY

IMAGEWORKS/ MIRRORSOFT £24.99

■ Mouse and Joystick

Theme Parks are generally seen to be happy places. Places to which families can go together and spend a day having fun, forgetting all their worries. Your grandfather can tell quite a different story.



This game may look innocent, but fail to win and your progress could be severely impaired!

Magic Canyon was one of the most successful Parks in the country, until something happened there to send your grandfather completely mad. You must find out what happened so that the memories of your family can be put to rest and the park can be re-opened. Otherwise the park and the land will have to be sold off, losing everything that your grandfather worked for.

As soon as you arrive at the park, it becomes clear that something is not quite right. A strange presence can be felt as you enter the first of the Park's three sections, Yesterdayland. For one, what happened to your clothes? The old-fashioned costume isn't what you were wearing when you arrived – things are going to be weird!

This is where your adventure begins. To begin with you must work out how to use the fortune telling machine, the home of Zoltan. He will tell you what you have to do to to return the park to normality – namely return eight runaway demons to him.

The demons are well hidden within the four areas of the park – Yesterdayland, Dragonland, Futureland and Dreamland – each of which has its own specific task that needs to be completed before the game can be finished. To enter the different areas an item must be picked up and used, but finding them isn't as easy as it sounds. All possible clues must be taken note of, as well as applying a substantial amount of brain power to solve the puzzles and win the challenges placed in your way by the mischievous demons. *Maff Evans*

CH-CH-CHANGES



Zoltan's magic gives you a new form as you travel to each section of the game.



Zoltan, the guardian of the fortune machine, magically appears to tell you of the task that lies ahead.



Bubble and fire demons attack in Dragonland, but that energy flask could prove a useful top-up.



Look out for the bird and pick up the keys he drops. Those pretty little boxes are just dying to be opened!

GRAPHICS AND SOUND

Theme Park Mystery's strength most definitely lies in its polished appearance. A lot of care has been taken to ensure that the feel leans well towards the ethereal adventure side of things (even though many of the sections are definitely arcade based) with lots of objects to use and graphic puzzles to overcome. Each park has its own distinct atmosphere, from the rustic colours of Yesterdayland, via the medieval catacombs of Dragonland to the surreal suroundings of Dreamland. Sound is sparse, consisting of a few sampled effects and tunes, but it is still effective where it is used – particularly the jolly bandstand music from the grabbing game and the mysterious theme tune (if only it was a bit longer).

LASTING INTEREST

As you'd expect from adventure game, it's extremely unlikely that you'll complete Theme Park Mystery in any great hurry. The arcade sections fit into the game well, but rather than returning for another 'bash' their challenge will only last until you've managed to carry out the task required to complete them. Still there's enough to get through before the game has been won, so adventure fans will probably sit glued to their screens until the challenge has been overcome.

JUDGEMENT

Adventures that are entirely graphics based are quite often simply arcade games with a few obligatory puzzles thrown in. Theme Park Mystery manages to avoid this trap, mainly due to the fact that the game was designed by a well-established adventure writer. With a great deal of thought, all the puzzles can be worked out logically but, even when you know what to do, there is still a lot of playing to be done before the final goal can be reached. Theme Park Mystery may be just the game to bridge the gap between pure adventure games and the adrenaline-fired world of shoot-em-ups or platform games, creating the perfect opportunity for fans of either to cross over and discover the delights of the other.

GRAPHICS	8
SOUND	6
INTELLECT	7
ADDICTION	7
OVERALL	82%


After a quick prayer the game's afoot!

NINJA SPIRIT

ACTIVISION £24.99 ■

Joystick

What's all this *Ninja Spirit?* Well, it allows the summoning of long-dead ancestors to see off present-day foes. Dealing with ancient magic, though, requires balls! Childish innuendo aside, the spheres in question are 'spirit balls' that give the living warrior power-ups on his sword, shuriken, rice scythes and 'lasson ropes' – a bit of string with a blender on.

All very handy, as from the word go Ninjutsu's most unpopular man is set upon by horde after horde of blood-crazed nutters. The guy's task is to fight his way through seven levels of death, destruction and other distractions for no good reason whatsoever.

The arenas vary, but the song remains the same, a horizontally-scrolling cut-em-up, with the small 'ninjy' leaping around the place waving various death-dealing devices. Bad guys appear in trees, hop on screen, charge headlong at him and even burrow under the floorboards, trying for a bot shot.

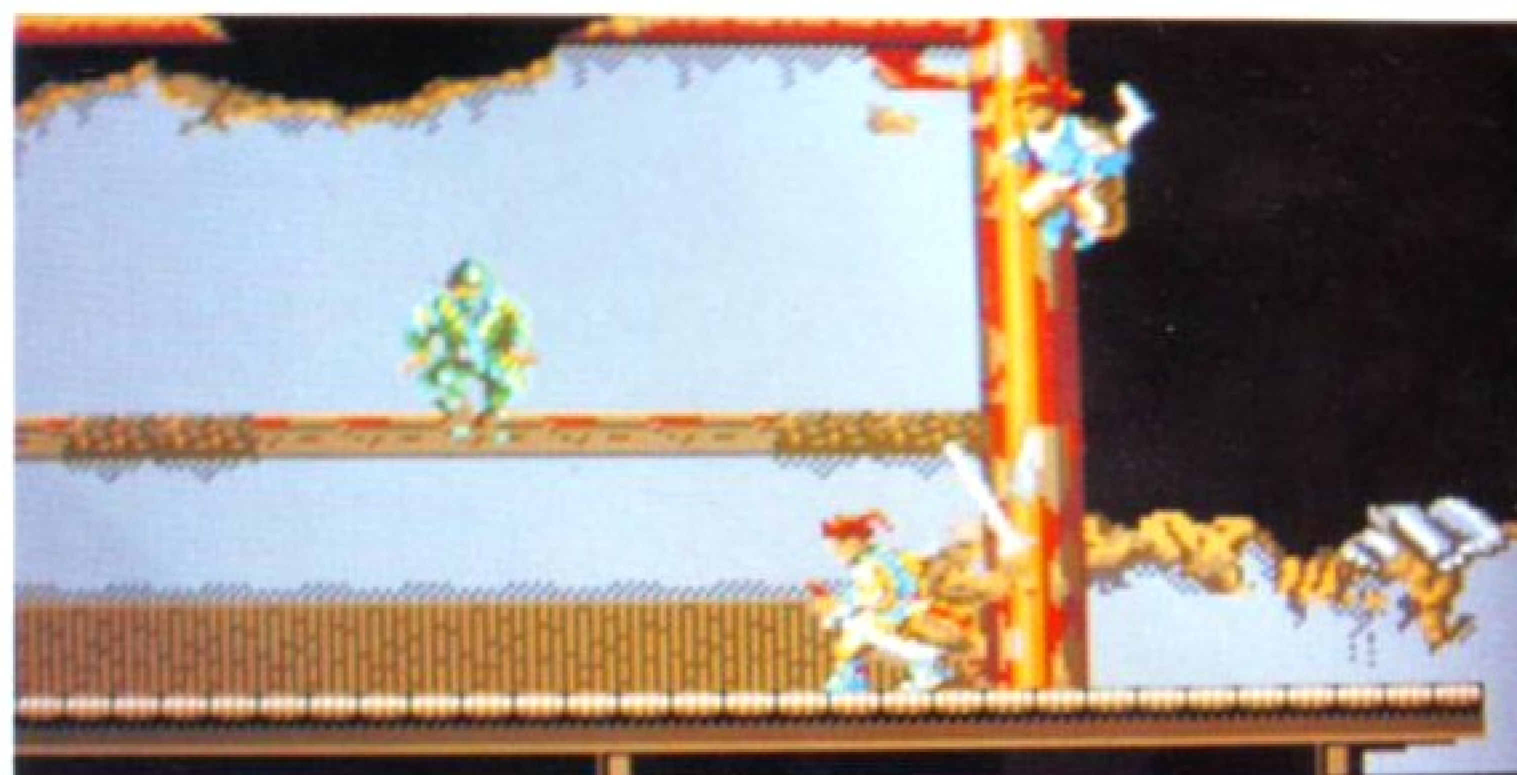

Spirit balls help to give your sword that cutting edge.

On the plus side Ninja can collect spirit balls, select the flashing weapon (the best one for that section) and then something magical happens. It's called mega-death! Swords throw out huge rings of destructive energy killing anything they touch, death stars triple in volume and various other deadly side-effects ensue.

The true *Ninja Spirit* shows when you collect a spirit ball and find that you've grown a solid shadow. This is one of your ancient friends back from the grave. They mirror every move, striking with the same power-ups as you. Your companion is invulnerable and hangs around until you croak, which can be a mighty long time with the spirit doubling your kill power. Sickening violence on a grand scale is the result, but now it's in your favour! ***Trenton Webb***

GRAPHICS AND SOUND

The days when ninjas followed the Henry Ford dress code (any colour as long as it's black) are long gone. These boys wear every colour under the sun and when mixed with Buddhas and bonsais they create a stylised Japan that never was, but should have been. The end-of-level guardians, too, are big, bad and beautiful. Lend an ear to the soundtrack while slaying and the picture is complete.


Two ninjas mean much more murder.

LASTING INTEREST

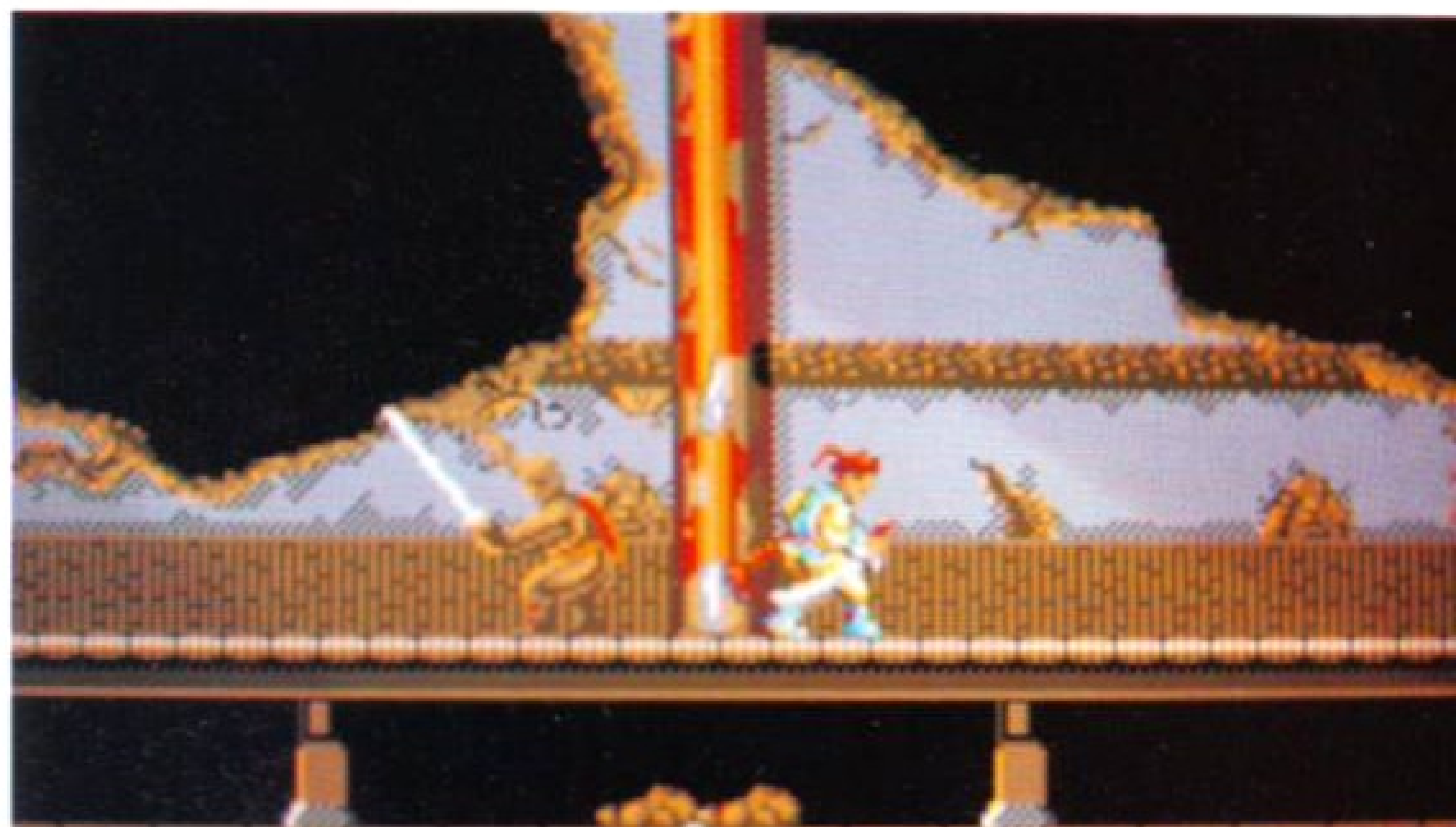
NS is a straight arcade charge into single-handed genocide. No subtle gameplay, no vast array of controls - just swords and spears, blood and guts. The first couple of levels are easy enough for any shogun assassin to carve up real quick. The major difficulty comes from finger fatigue as foes fling themselves forward incessantly. There's an instant magic but no real development in the style of opponent, so life soon gets a little bit dull. Enough is missing to bore the 'intelligent' gamer to tears in ten seconds flat, while any accomplished coin-op killer will rip through all seven levels in no time.

VERDICT

Ninja Spirit was a great arcade machine game, the double-action blades of the ninja and his spirit shadow putting Gillette's corporate output to shame. But what was fun for a ten-minute massacre drags as a home conversion. The extra power weaponry helps in the beginning, as does the double ninja bonus, but after that, all that's left are the end-of-level guardians – and they're good, but not that good.

GRAPHICS	8
SOUND	7
INTELLECT	4
ADDICTION	4
OVERALL	63%

Watch out for that guy burrowing up below.



Special Reserve

CAN YOU AFFORD NOT TO JOIN?



- Bi-monthly ***Buyer's Guides,*** each with reviews of 40 games and more.
- ***Release Schedules,*** bi-monthly, with advance release information.
- ***7-day hotline***, to 8pm weekdays, 10-5.30 Saturdays, 11-5 Sundays.
- ***Fast despatch*** of stock items. Most lines from our stock of 40,000 games.
- ***Catalogue, Membership Card & Folder*** for the Buyer's Guides.
- Games sent ***individually wrapped*** by ***first class post.***
- ***Written confirmations*** (and receipts) sent when we receive each order.
- ***Refunds, or change of order*** on request, if there is a delay just phone.
- ***No commitment, no obligation to buy anything (unlike others).***
- ***The best games,*** available at the ***best prices.*** That's why over ***20,000 members*** have already joined ***Special Reserve.***

Amiga Software

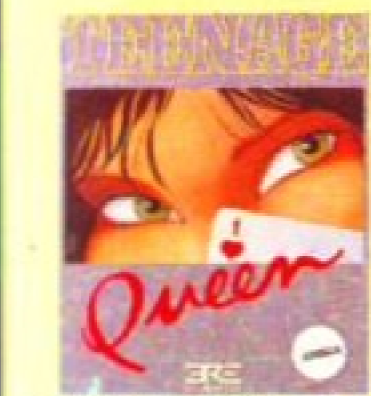
688 ATTACK SUB	16.99
ADIDAS CHAMP FOOTBALL	15.99
AMOS (GAMES CREATOR)	27.49
AMOS SPRITES 1000	9.99
AMOS VIDI DIGITISER	51.49
ANARCHY	15.99
ARKANOID	12.99
BACKGAMMON PROF.	12.99
BALANCE OF POWER 1990	15.49
BARDS TALE 1	7.99
BARDS TALE 2	16.49
BATMAN THE MOVIE	15.99
BATTLE OF BRITAIN	19.99
BATTLECHESS	16.49
BATTLEHAWKS 1942	16.49
BEACH VOLLEY	15.99
BEYOND ZORK (INFOCOM)	24.99
BLADE WARRIOR	15.99
BLOODWYCH DATA DISK	9.99
BOMBER	18.49
BOMBER MISSION DISK	13.49
BRIDGE PLAYER 2150	18.49
BUDOKAN	16.49
C-LIGHT (3-D ANIMATION + DRAWING)	31.49
CABAL	15.49
CARTOON CAPERS	12.49
CASTLE MASTER	15.99
CHAMBERS OF SHAOLIN	14.99
CHASE H.Q	15.99
CHESS CHAMPION 2175	18.49
CHRONOQUEST 2	18.49
CLOUD KINGDOMS	15.99
COLLOSUS CHESS X	15.49
COLONY (1 MEG)	17.49
COLORADO	15.99
CONQUEROR	15.99
CONTINENTAL CIRCUS	11.99
CRACK DOWN	16.99
CUTTHROATS (INFOCOM)	16.49
CYBERBALL	12.99
CYCLES	15.99
DAMOCLES	15.49
DATA STORM	12.49
DEJA VU	15.49
DEJA VU 2	15.49
DELUXE MUSIC CONST' SET	46.47
DELUXE PAINT III	51.49
DEMONS TOMB	15.99
DOUBLE DRAGON 2	13.49
DRAGON NINJA	15.99
DRAGON'S LAIR (1 MEG)	28.49
DRAGONS BREATH	18.99
DUNGEON MASTER (1 MEG)	15.49
DUNGEON MASTER EDITOR	7.49
DYNAMIC DEBUGGER	16.49
DYTER-07	12.99
E-MOTION	16.99
ELVIRA MISTRESS OF THE DARK	19.49
ENCHANTER (INFOCOM)	18.49
ESCAPE FROM SINGE'S CASTLE	28.49
ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS	12.99
F16 COMBAT PILOT	15.99
F16 FALCON	18.49
F29 RETALIATOR	15.99
FERRARI FORMULA 1	16.49
FINAL BATTLE	15.99
FLIGHT SIMULATOR 2	25.49
FS 2 WEST EUROPE SCENERY	13.99
FOOTBALL DIRECTOR 2	12.99
FULL METAL PLANETE	15.49
FUN SCHOOL 2 (2-6)	12.49
FUN SCHOOL 2 (6-8)	12.49
FUN SCHOOL 2 (8+)	12.49
FUTURE WARS	16.49
GAUNTLET 2	7.99
GHOULS 'N' GHOSTS	16.49
GO PLAYER PROFESSIONAL	18.49
GOLD RUSH! (SIERRA)	16.49
GRAND PRIX CIRCUIT	16.49
GRAVITY	16.49
GREG NORMAN'S GOLF	16.99
GRIDIRON (U.S FOOTBALL)	15.49
GUNSHIP	15.99
HAMMERFIST	15.99
HARLEY DAVIDSON	15.49
HILLSFAR (SSI)	17.49
HITCH HIKERS GUIDE	39.99
HOLLYWOOD HIJINX	24.99
HOME OFFICE KIT (KIND WORDS 2.0, MAXI PLAN, INFO FILE, PAGESETTER, ARTISTS CHOICE, FONTS)	86.49
HONDA RVF 750	15.49
HOUND OF SHADOW	16.99
HOYLES BOOK OF GAMES	22.49
IMPERIUM	16.49
INDIANA JONES ACTION	11.99
INDIANA JONES ADVENTURE	16.99
INFESTATION	15.49
INFIDEL (INFOCOM)	17.49
IRON LORD	16.49
IT CAME FROM THE DESERT (1 MEG)	18.49
I.C.F.T.D. DATA DISK (1 MEG)	10.49
ITALY 1990	16.49
IVANHOE	15.99
JACK NICKLAUS GOLF	16.49
JACK NICKLAUS GOLF DATA1	8.99
JUMPING JACKSON	12.49
KEEF THE THIEF	17.49
KICK OFF	12.49
KICK OFF 2	12.49
KICK OFF EXPANSION DISK	7.49
KID GLOVES	16.49
KIND WORDS 2.0 (W/P)	29.99
KINGS QUEST 1, 2 & 3	21.49
KINGS QUEST 4 (SIERRA)	21.49
KLAX	12.99
KNIGHTS OF CRYSTALLION	19.99
LEADERBOARD BIRDIE	16.49
LEISURE SUIT LARRY 1	18.99
LEISURE SUIT LARRY 2	21.49
LEISURE SUIT LARRY 3	21.99
LIFE AND DEATH	15.49
LIGHT FORCE (R-TYPE, VOYAGER, BIO-CHALLENGE, IK+)	15.99
LIVERPOOL	11.99
LURKING HORROR (INFOCOM)	24.99
MAGNUM 4 (COMPILATION)	18.99
MANCHESTER UNITED	15.99
MANIAC MANSION	16.99
MAVIS BEACON TEACH TYPING	17.99
MIDWINTER	18.49
MIND FOREVER VOYAGING	19.99
MOONMIST (INFOCOM)	19.99
MUSIC X	124.99
NINJA SPIRIT	15.99
NINJA WARRIORS	16.49
OMNI-PLAY BASKETBALL	15.49
OMNI-PLAY HORSE RACING	15.49
OPERATION THUNDERBOLT	15.99
PAPERBOY	12.99
PERSONAL NIGHTMARE	18.99
PHOTON PAINT 2.0 (1 MEG)	54.99
PIPEMANIA	15.49
PIRATES	15.99
PLANETFALL (INFOCOM)	24.99
PLAYER MANAGER	12.49
POLICE QUEST 1 (SIERRA)	15.99
POPULOUS	16.49
POPULOUS PROMISED LANDS	7.99
POWERDROME	16.49
PRO TENNIS TOUR	16.49
PROTEXT WORD PROCESSOR	64.99
PUBLISHERS CHOICE DTP (KIND WORDS 2, PAGESETTER 1.2, ARTISTS CHOICE, (1 MEG)	59.99
RAINBOW ISLAND	15.99
RAMROD	16.99
RED STORM RISING	16.49
RISK	12.49
ROBOCOP	15.49
SARGON 3 CHESS	13.97
SCAPEGHOST (LEVEL 9)	12.49
SCRABBLE DE LUXE	12.99
SEASTALKER (INFOCOM)	19.99
SHADOW OF THE BEAST (NO T-SHIRT)	15.49
SHADOW WARRIORS	15.99
SHADOWGATE	15.99
SHERLOCK (INFOCOM)	24.99
SHERMAN M4	16.99
SHOOT 'EM-UP CONSTR' KIT	18.49
SIM CITY	13.99
SIM CITY TERRAIN EDITOR	9.99
SPACE ACE	27.49
SPACE HARRIER 2	10.99
SPACE QUEST 1 (SIERRA)	16.49
SPACE QUEST 2 (SIERRA)	16.49
SPACE QUEST 3 (SIERRA)	21.49
SPACE ROGUE	17.49
SPELLBREAKER (INFOCOM)	24.99
STARCROSS (INFOCOM)	24.99
STARFLIGHT	16.99
STARTER KIT (KIND WORDS 2.0, FUSION PAINT, SUPER SKI, CRAZY CARS, MINI GOLF)	43.49
STEVE DAVIS SNOOKER	12.49
STRYX	12.99
STUNT CAR RACER	15.99
SUPER CARS	13.49
TEAM YANKEE	17.49
THE LOST PATROL	15.99
THEME PARK MYSTERY	15.99
THIRD COURIER	15.99
TOWER OF BABEL	16.49
TREASURE TRAP	15.99
TRIAD VOL 3	19.49
TURRICAN	12.99
TV SPORTS BASKETBALL	18.49
ULTIMA 5	17.99
UMS CIVIL WAR DISK	9.49
UMS VIETNAM DISK	9.49
UNINVITED	15.49
UNTOUCHABLES	15.99
VENUS	13.49
VETTE (CORVETTE)	18.49
WAR IN MIDDLE EARTH	15.49
WARHEAD	15.99
WAYNE GRETZKY HOCKEY	15.99
WILD STREETS	15.99
WINDWALKER	17.49
WISHBRINGER (INFOCOM)	19.99
WITNESS (INFOCOM)	19.49
WORKBENCH 1.3	13.49
WORLD BOXING MANAGER	12.99
WORLD CUP SOCCER - ITALIA 90	12.99
X-OUT	13.49
XENOMORPH	15.49
ZOMBI	16.49
ZORK 1 (INFOCOM)	16.49
ZORK TRILOGY (INFOCOM)	29.99

SONY 3.5" DS/DD DISKS 69p each

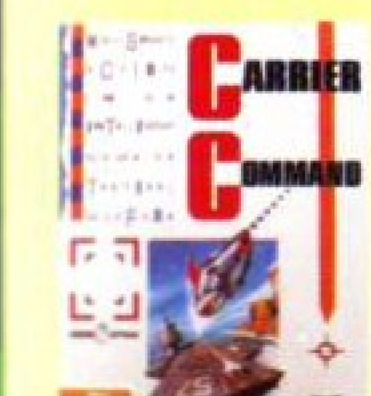
INEVITABLY, SOME OF THE ABOVE GAMES MAY NOT YET BE RELEASED. ALL GAMES ARE DESPATCHED AS SOON AS POSSIBLE.
Special Reserve and Official Secrets are trading names of Inter-Mediates Ltd. Registered in England Number 2054713.
Reg. Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG. VAT reg. no. 424 8532 51

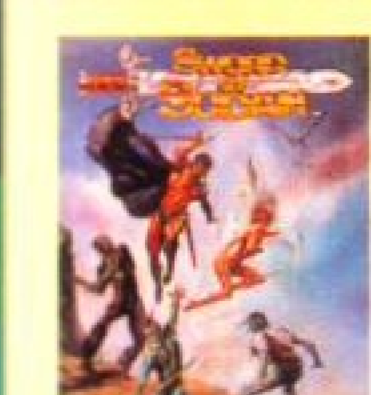
Amiga Mega-Savers

ADVENTURE CONSTRUCTION KIT	11.99
ALTERED BEAST	6.99
ARCHIPELAGOS	6.99
AUSTERLITZ (BATTLE OF)	11.99
BAAL	6.99
BALLISTIX	6.49
BALLYHOO (INFOCOM)	9.99
BATTLE SQUADRON	12.99
BLACK CAULDRON	7.99
BLACK LAMP	7.49
BLOOD MONEY	7.49
BLOODWYCH	8.99
BUGGY BOY	9.99
CAPTAIN BLOOD	5.99
CARRIER COMMAND	7.99
CHAMP (USA) FOOTBALL	4.99
CHESSMASTER 2000	8.49
CHRONO QUEST	9.49
CONFLICT EUROPE	6.49
CORRUPTION (M/SCROLLS)	9.99
DRAKKHEN	13.99
DYNAMITE DUX	7.49
EDDIE EDWARDS SUPER SKI	4.99
ELIMINATOR (1.2 AMIGAS ONLY)	4.49
ELITE	9.99
EYE OF HORUS	6.99
F16 FALCON MISSION DISK	7.99
FAST BREAK (VOLLEYBALL)	6.49
FISH! (M/SCROLLS)	9.99
FOOTBALL MANAGER 2 + EXP	10.99
GNOME RANGER (LEVEL 9)	6.99
GUILD OF THIEVES (M/SCROLLS)	9.99
HARD DRIVIN'	9.99
HIT DISKS VOLUME 2 (LEATHERNECKS, MAJOR MOTION, TIME BANDIT, TANGLEWOOD)	8.49
HOSTAGES	7.49
HYBRIS	7.49
INGRID'S BACK (LEVEL 9)	7.99
INTERNATIONAL KARATE +	7.99
JINXTER (M/SCROLLS)	9.99
KING OF CHICAGO	9.99
KRISTAL	8.99
KULT	7.99
LANCELOT (LEVEL 9)	9.49
LASER SQUAD	7.49
LEATHER GODDESSES (INFOCOM)	12.99
LEATHERNECKS	5.99
LOMBARD RAC RALLY	10.99
LORDS OF THE RISING SUN	9.99
MENACE	6.99
MICROPROSE SOCCER	8.49
MILLENIUM 2.2	6.99
NEVER MIND	6.49
NEW ZEALAND STORY	9.99
NIGEL MANSELL'S GRAND PRIX	5.99
NORTH AND SOUTH	10.49
PACLAND	6.49
PACMANIA	6.99
PASSING SHOT (TENNIS)	8.99
PAWN (M/SCROLLS)	9.99
PHOTON PAINT	6.49
POWER DRIFT	4.99
PURPLE SATURN DAY	7.49
ROCKET RANGER	8.99
SHADOW OF THE BEAST + T-SHIRT	12.99
SHOGUN (INFOCOM)	15.49
SIM CITY	13.99
SKYCHASE	7.49
SKYFOX	5.99
SPEEDBALL	6.49
STARGLIDER	6.49
STARGLIDER 2	9.99
SUPER WONDERBOY	7.49
SWORD OF SODAN	7.99
TEENAGE QUEEN (STRIP POKER)	8.49
THE PRESIDENT IS MISSING	5.99
THREE STOOGES (CINEMAWARE)	6.99
THUNDERBIRDS	5.99
TIME & MAGIK (LEVEL 9)	6.49
TRIAD VOL2 (MENACE, BAAL, TETRIS)	7.99
TRIVIAL PURSUIT	8.49
TURBO CUP	6.49
TV SPORTS FOOTBALL (USA)	11.99
UMS - UNIVERSAL MILITARY SIM	7.49
VIRUS	6.99
VOYAGER	9.49
WATERLOO	10.49
WHO FRAMED ROGER RABBIT	8.99
XENON II, MEGABLAST	6.99

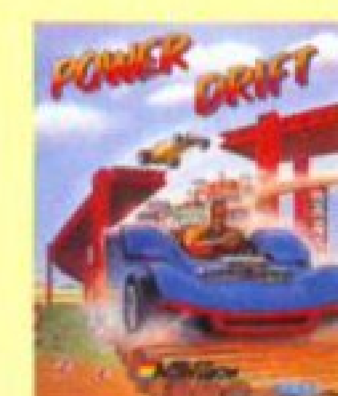


TEENAGE QUEEN **8.49**


CARRIER COMMAND **7.99**


SWORD OF SODAN **7.99**


BEAST + SHIRT **12.99**



POWERDRIFT **4.99**



XENON II **6.99**

OR JOIN EUROPES BIGGEST ADVENTURE CLUB

OFFICIAL SECRETS

FOR ADVENTURES AND ROLE PLAYING AND MORE

All the benefits of Special Reserve **plus:**

- ***Confidential.*** Our 32 page bi-monthly magazine is essential reading for those interested in adventures or role playing games. Written by experts, *Confidential* has covered everything from How to Host a Murder to Which F16 Flight Simulator? Our agents, led by the Master Spy known as "The Boss Upstairs", seek out the secrets of RPG's, FRP's, MUG's, PBM's, Leisure Suit Larry, The Russians, Elvira... & more. ***Note:*** You can subscribe to Confidential without joining the clubs for **£15.00** (UK) by entering **"CONFIDENTIAL SUBSCRIPTION"** on the order form.
- ***Myth.*** Written by Magnetic Scrolls, authors of The Pawn, exclusively for members of Official Secrets. Myth is a small adventure set in Ancient Greece. In it you'll meet The Ferryman, cheat Death and face the nine-headed Hydra. Myth includes the famous Magnetic Scrolls parser and graphics and is included in the price of membership.



Amiga Format said: "An excellent adventure... witty, cunning and just plain good fun! If you liked Fish! you'll probably like this, because they're very similar in style: you may even prefer Myth, it's that good!"

Myth Ratings: **Crash 91%, CU 90%, Amiga Format 87%, TGM 85%**

- ***Sim City or Drakkhen (rrp 29.99).*** Of Drakkhen, ***ST Action said:*** "Drakkhen really impressed me. For me, the game was a subtle cross between my all-time favourite, Dungeon Master, and the SSI fantasy role-playing games. The graphics are superb.... Overall, Drakkhen is an excellent RPG, one that will take quite some time to beat" and ***Zero said:*** "Absolutely brilliant". Of Sim City, ***ACE said:*** "Sim City is a politician's - or a gamesplayer's - dream....comparisons spring immediately to mind with Populous... but Sim City seems to have much more depth...." and ***C&VG said:*** "Sim City is utterly fab"
- ***Help-Line.*** Manned weekdays until 8pm and Sundays - with solutions to most adventures.

Annual UK **Official Secrets** Membership including 6 issues of Confidential, Myth, Drakkhen or Sim City, Help-Line **and Special Reserve** membership. **27.99**

SALES LINE 0279 600204.

PLEASE NOTE THAT THERE IS A SURCHARGE OF 50P PER GAME FOR ORDERS PLACED BY TELEPHONE.

Name & Address ____________________

Post Code __________ Tel. __________

Computer __________ *5.25"/*3.5"/*3.0"/*TAPE

Special Reserve or Official Secrets
P.O. Box 847, Harlow, CM21 9PH

Existing members please enter your Membership No. [ ]

Special Reserve £5 UK, £6 EEC, £7 World or
Official Secrets £27.99 UK, £32 EEC, £36 World
with Drakkhen and Myth [ ] *or* with Sim City and Myth [ ] AMIGA

PLEASE ENTER MEMBERSHIP FEE £

Item __________ £
Item __________ £
Item __________ £

Software Prices include UK or EEC Postage. World software orders please add £1.00 per item. For non-software items such as joystick or blank disks please add 10% EEC or 25% World for carriage. Overseas orders must be paid by credit card. £

Credit card expiry date __________

*CHEQUE/*POSTAL ORDER/*ACCESS/*VISA



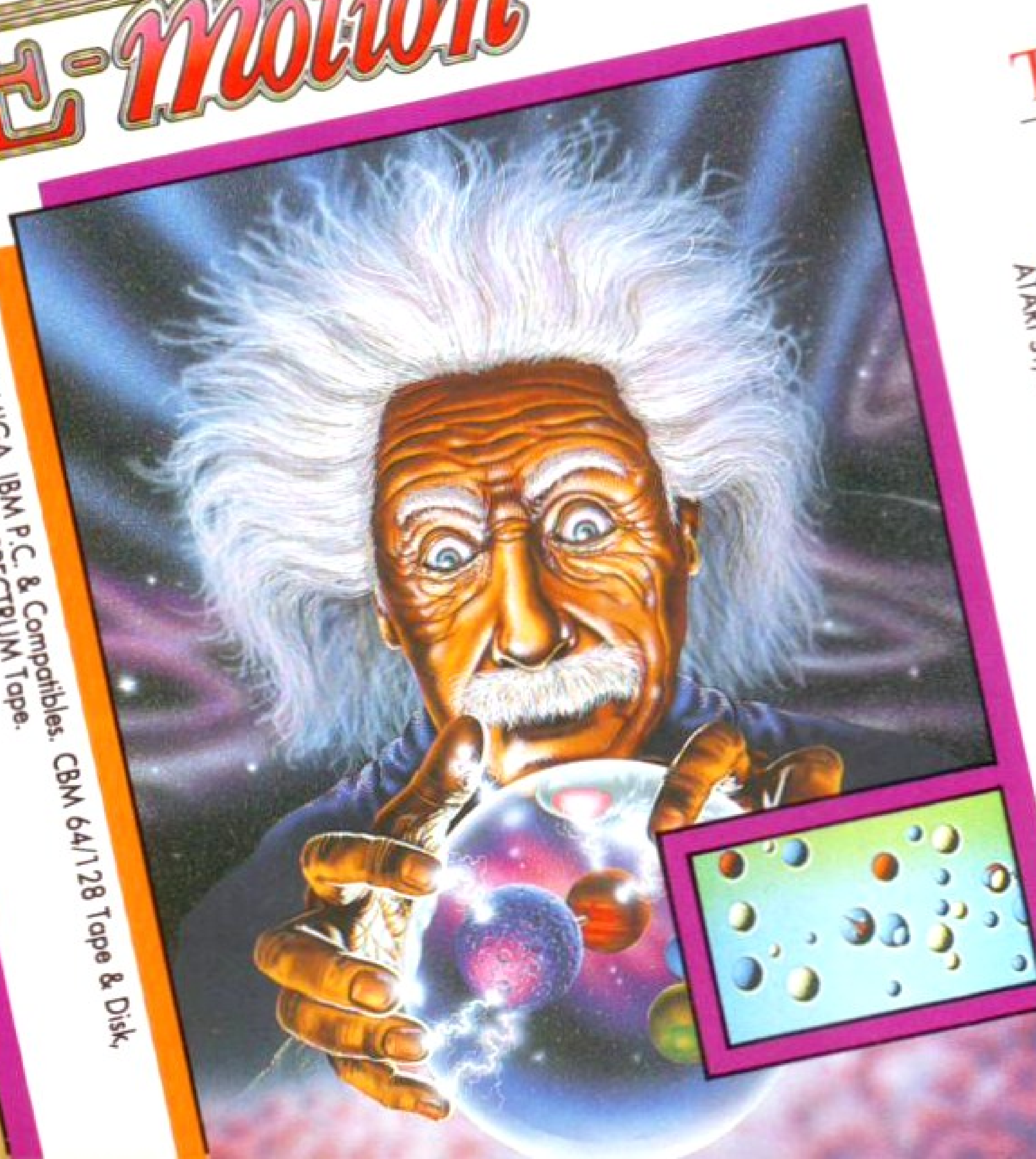
On every corner, in every street, a quiet revolution draws the generations of a new age into a spellbinding challenge against that icon of modern living... the computer.

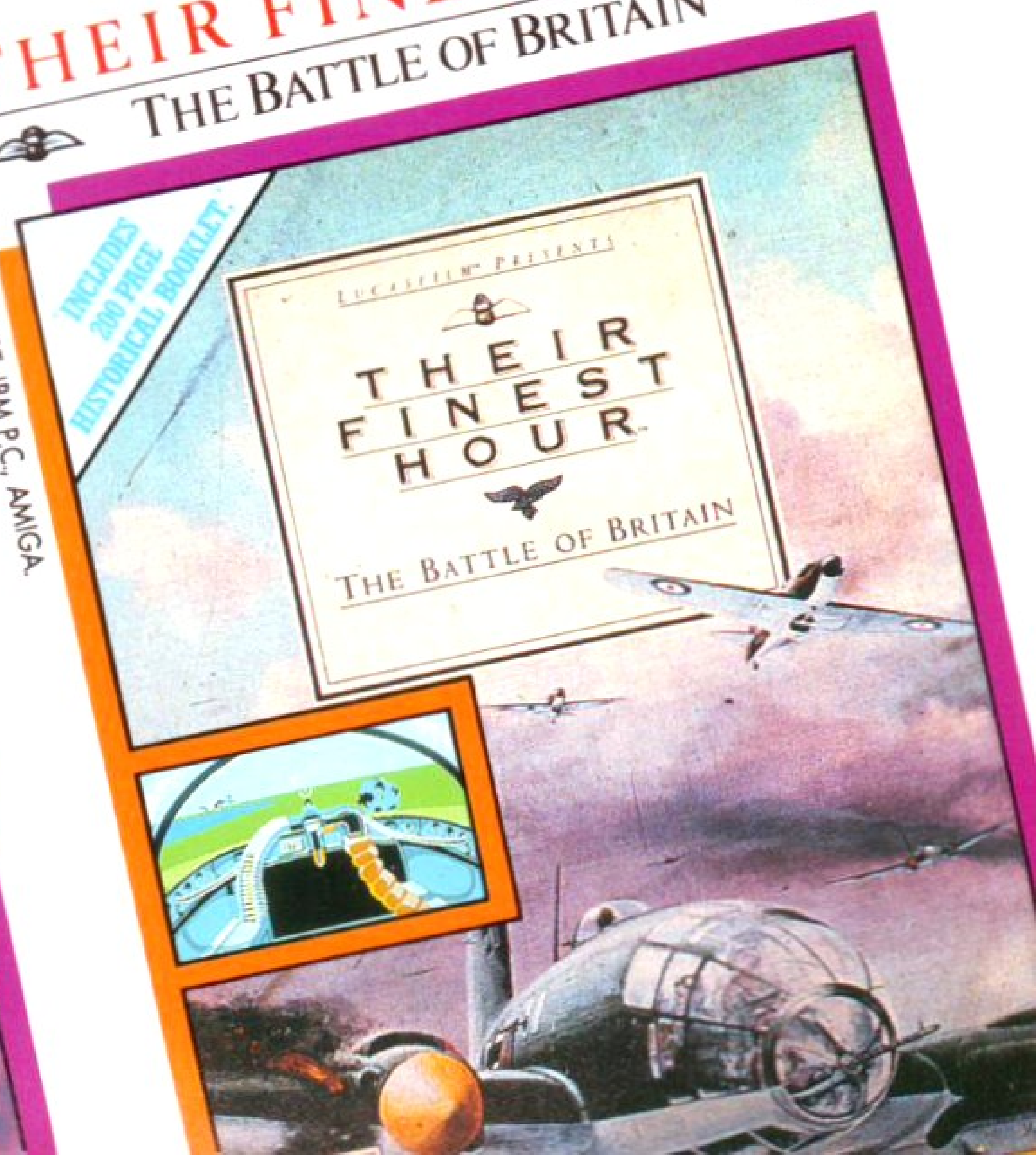
If only the driving forces behind this revolution in entertainment could recognise with the same fervent enthusiasm the needs and desires of their devoted public.

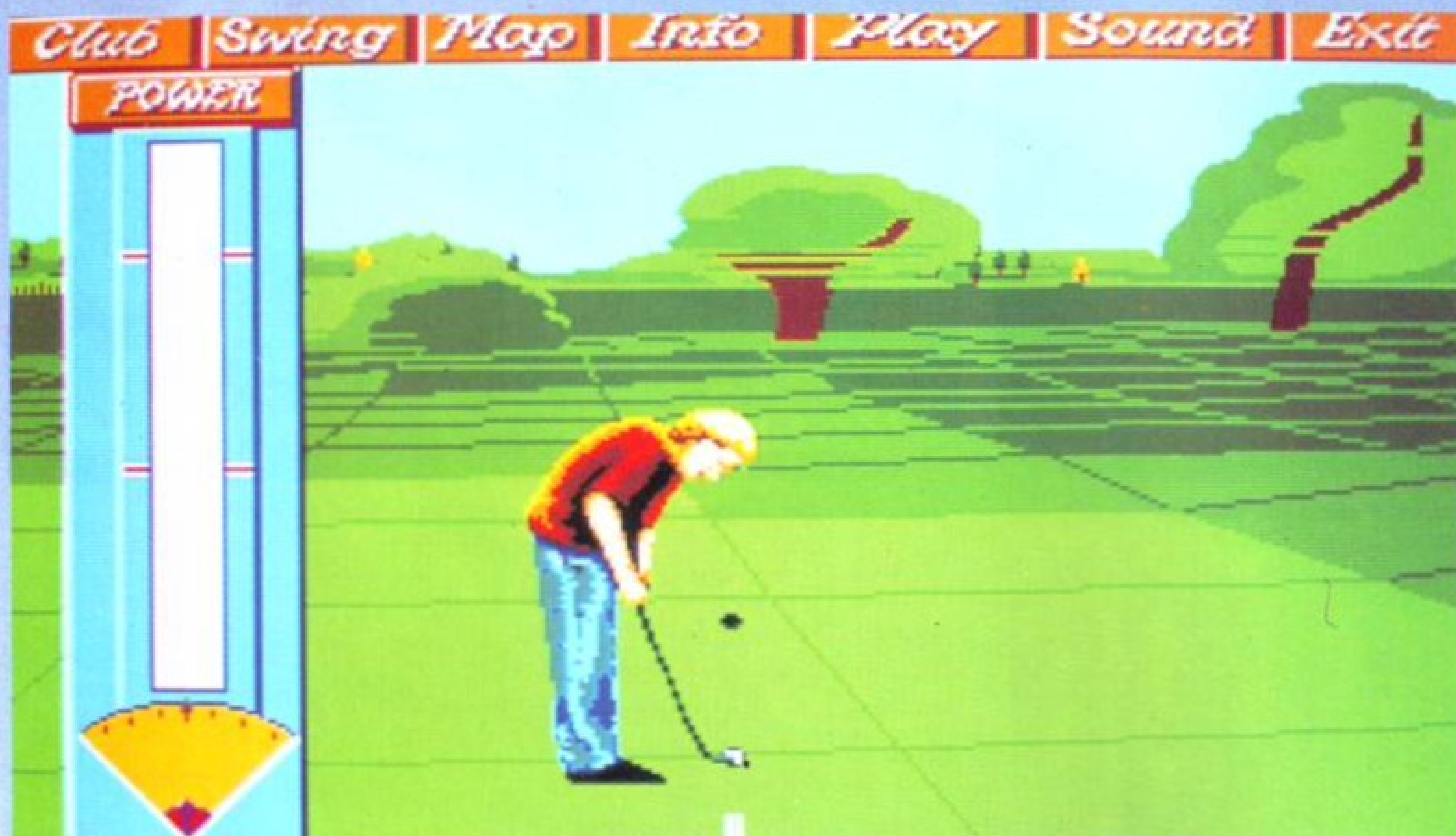
However, amongst those pioneers of computer games software stands one company, alone, a shining colossus in the art of computer entertainment. There is no other company that has displayed such enthusiasm, no other company that can demonstrate an unequalled track record and no other company that has recorded so many milestones in technical innovation, sophistication and breadth of product interest. From arcade action, through graphic adventure to strategic simulation there is only one company that has taken of the best to ensure the user enjoys nothing but the best.

*In a world in which so much is disguised behind darkness and mystique, there is one company that has been proud to set the standards by which others must be judged – that standard is gold.... **US Gold** .... it's what your computer has been waiting to discover.*

our City







Don't undershoot on the putting green. Because there are no pointing arrows (the ball will automatically drift toward the hole) it seems simple. But putting distance offers the greatest challenge.

ULTIMATE GOLF

GREMLIN £24.95 ■ Joystick, Mouse and Keyboard



Choose your club with care. The caddy will help, but it's worth bearing in mind that he is only the caddy. You decide.

Detractors of the game claim that golf isn't so much a sport as an insult to lawns. So if you're the kind of person who, adding injury to insult, can turn the local pocket of greenery into something resembling The Somme, playing from home could well be the perfect solution.

Gremlin have come suddenly to the fore with what is claimed to be "The most accurate Golf simulation" to date. With the help of the (still) World Number One-ranked Greg Norman and a posse of Sheffield programmers the firm have conjured up what is set to be undoubtedly the most intriguing golf simulation since the wholly magnificent *Leaderboard*.

For the first time you are required not simply to make a few mathematical calculations, aim and fire but to master and utilise the variety of tricks which make the likes of Norman such a marvel. Gremlin have provided the player with a myriad of useful options designed to aid the wee ball's progress from tee to hole. Fortunately for those of us who like a challenge this can have the opposite effect. For one you can change the angle of spin to a finite degree. This can result in a shot which will turn your pitching pals green with envy or can make you look like a complete berk.

There's the chance to give your ball detailed top and spin which can make the dimpled object of frustration stop dead as soon as it hits the ground. This brand of jiggery-pokery could take you months to perfect.

Ensuring accuracy of stroke is no breeze either. The Gremlins have designed an extremely fast swingometer which will surely test your nerve. If you don't hit your button at the crucial moment the result will be somewhere between the lack-lustre and the diabolical.

There are rakes of playing options. You can take a stroll around one of two courses on your own or with some opposition and you can play Fourball, Foursome, Greenball or Skins. At every turn there pretty windows offer extra options to give you a clear picture of variables such as weather, wind speed and turf.

Each individual club head is pictured in one window so you make the best choice. The usual map is also to hand, but you have the option to view the hole from any part of the course. And there are many fiendish obstacles as well as putting greens which will make your blood boil.

Gremlin have taken a small eternity to get this game out, but it's turned out to be an absolute corker. ***Colin Campbell***

GRAPHICS AND SOUND

The landscape has been drawn in a squarial style which, while not always appropriate, manages to give you a good picture of terrain. On the whole the affair is pretty and bright although sometimes a tad fuzzy. The worst aspect of this game is the sound which you would do well to dispense with. Clearly golf is not a noisy affair, but audio simulations of balls dropping into holes or magnificent one wood swings are, on this occasion, awful.

LASTING INTEREST

For one player or four there is plenty to do and the more you get the swing of it the more you'll enjoy this game. It's excellent fun. Gremlin have provided only two courses but we are promised extra fairways, lawns and greens in the near future.

JUDGEMENT

Despite the number of options available this isn't an excessively fancy game. It's accurate, intelligent and challenging and will prove to be one of the most popular sports sims of the year.

GRAPHICS	8
SOUND	2
INTELLECT	6
ADDICTION	9
OVERALL	88%



Subtle changes to swing, angle and top will make all the difference.



Ignore the map and suffer the consequences. There are some fierce obstacles.



Italy move in to score. INSET: A change of view for the goal-kick.



Typical Latin enthusiasm takes over as a goal is scored.

ITALY 1990

US GOLD £24.99 ■ Joystick

If things carry on as they have been with everyone and his cat releasing World Cup games, then no one will be able to get away from their machines long enough to watch the actual event! The latest game to arrive is from US Gold (don't mention *World Cup Carnival!*) and comes in the usual 'view from almost above' mode of play.

You can choose to play any of the teams taking part in the competition, with all teams adhering to a seeding system. The difficulty of the game depends on how strong your selected team is. For example, selecting a team such as Italy or Brazil will make your job of reaching the final and claiming the cup pretty easy, whereas picking someone like Egypt makes things a little tougher! Once you have chosen a team to represent, the playing formation and team list is set up, then it's off to the game!

The form of the competition closely follows the World Cup itself. That is, three qualifying matches have to be played, with the top two teams from each group going through to the second round. From then on the game is played as a straight knockout. ***Maff Evans***



Select players from the squad and put them in formation.

GRAPHICS AND SOUND

Italy 1990 is very well presented. The intro screens are colourful and nicely drawn, and there are some nifty touches such as the TV presenter outlining the forthcoming action. The graphics in the game itself are of a similarly high standard. The sprites move effectively around the smooth-scrolling pitch, and extras such as the animated scoreboard and touchline-view goal-kicks add to the atmosphere. The music is jolly enough, but the in-game effects don't consist of much more than a few thuds and whistles. Where's the joyous Italian crowd? Gone home, it seems.

LASTING INTEREST

Romping through the competition to take the cup is rather easy if you play as one of the top seed teams, but just try taking the United Arab Emirates into the final and you'll find that it's a totally different ball game! The other teams will not hesitate to stomp all over you. This kind of challenge will have you plugging away until at least after the World Cup final's been televised.

GRAPHICS	8
SOUND	5
INTELLECT	4
ADDICTION	7
OVERALL	80%

JUDGEMENT

Anyone who remembers US Gold's last 'official' World Cup release may be a little dubious about *Italy 1990*. However this hesitation is unfounded, since US Gold have put their footy troubles behind them and have come up trumps with an amusing, well-presented and superbly playable footy game. The wealth of teams and players gives the game a healthy amount of variety to keep players interested, and even if you do get bored, you can always keep yourself occupied with the World Cup Trivia book included in the package until the next game's on telly!



"...and it's over to our man in the

TREASURE TRAP

ELECTRONIC ZOO
£24.99 ■ Keyboard





The opening screen in the centre of the ship. The sphere and pyramid are keys (the sphere is needed to open all four doors here) and on top of the crate is your first gold bar.

Isometric 3D, popular in the mid-Eighties, is now making a comeback. The advantage of this technique is that each location in a game can contain a great deal of graphic detail. The setting here is a sunken ship containing gold which you are trying to recover.

The ship is composed of 100 rooms, most containing gold bars, aquatic lifeforms intent on destruction and man-made hazards. As in all games of this type you can jump and pick things up - the two essential abilities for solving the problems in each room.

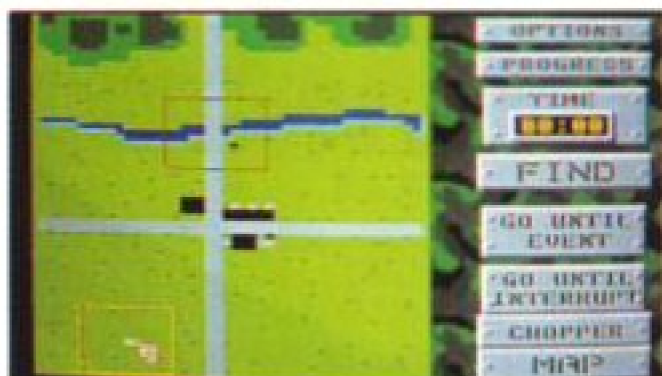
The gold bars are sometimes in easy reach but more often are hidden away or perched in awkward places. Getting them involves pushing objects around, using lifts, making smaller creatures go where you can't and generally outwitting the beasties. Many things can whisk away one of your lives - and your air supply must constantly be replenished by collecting oxygen tanks.

Helpful objects include keys and 'smart' fish which act like a smart bomb, swimming round and killing off all the dangers in a room.

There's plenty of ship to explore and it looks good too. Excellent title music rounds off the feel nicely. However, the puzzles in each room are fairly simple and that means the lasting interest dips once you've explored the ship, which should only take a few days. It's fun, but although the map is complicated enough, the rooms are not. *Bob Wade*

GRAPHICS 7 / SOUND 6 / INTELLECT 5 / ADDICTION 7 / OVERALL 68%


The mission briefing. Each of the missions can be practised as often as you like, but can only be done for real once.


Into the mission. The brown box indicates the target zone, and there are no enemy about yet.



Here are the enemy. Things are not looking good.

D.R.A.G.O.N. FORCE

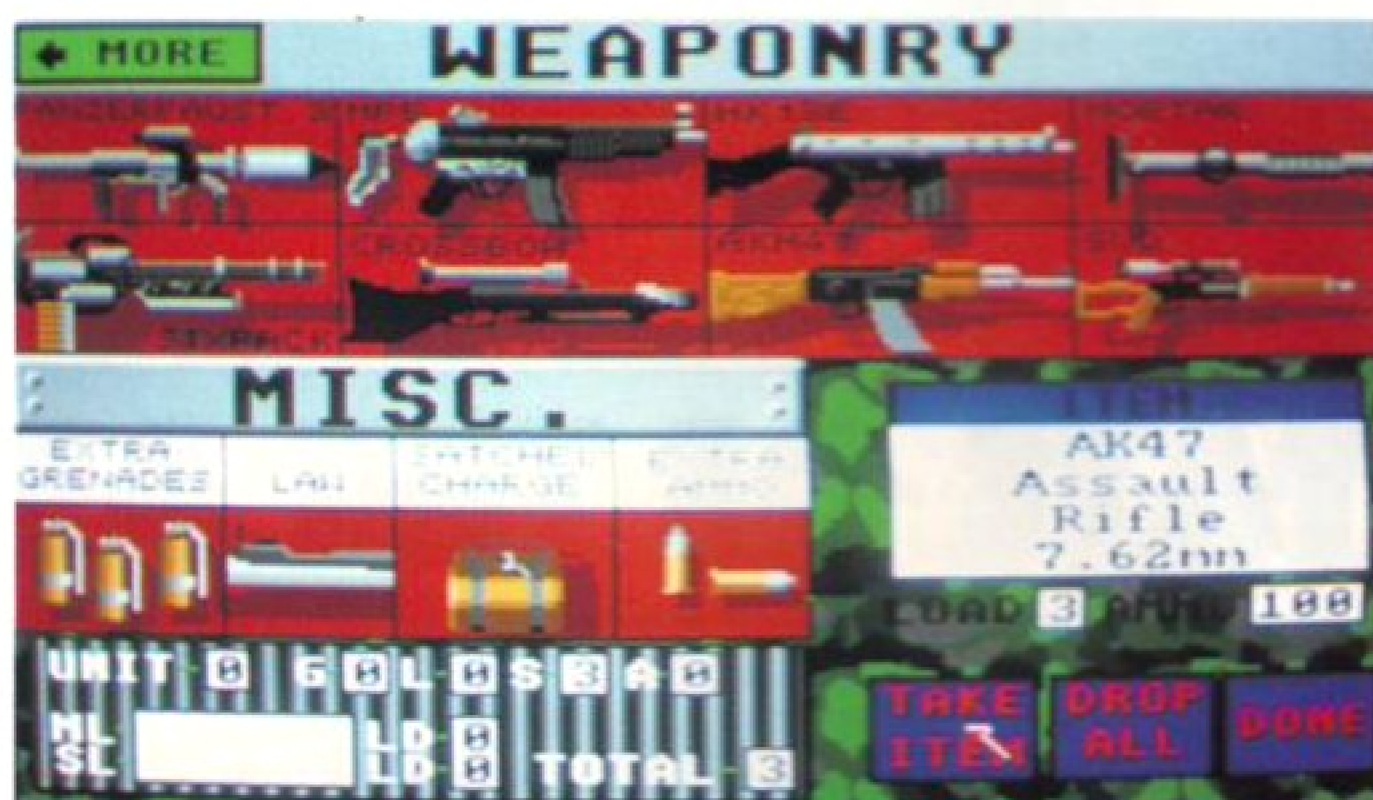
INTERSTEL £29.99 ■ Mouse

The Drastic Response Assault Group Operations Network are in town and they mean business. These boys are a crack group of commandos 14 strong working for all the good nations of the world in a bid to stamp out terrorism. Guess what – you're in charge of the whole bunch.

This is a single-player tactical skirmish wargame featuring some dozen missions that can be played in any order. For any mission only seven of the bunch can be selected, so the first thing to do is get the mission briefing. Pick carefully to get the best men, because they are all specialists in different areas including demolition work, handling nasty great machine guns and close combat.

Once you know what must be done and you've picked the people to do it, the next task is to select weaponry for each soldier. Each one of the squad has several characteristic ratings such as awareness, intensity and strength, the strength rating determining how much of a load the soldier can take into battle.

Then it's time to do the job. Your group is airlifted to the game area and you then have a fixed time to complete the task before reassembling your men at the extraction site where a helicopter will come in and get you out – the helicopter can be called in before the specified time if you finish the job early or get into a tight spot.



After you've picked the team, kit them out with some weaponry.

The game is played in rounds. Up to five orders can be given to each man who will endeavour to carry them out. Once you've issued orders (they're small and quite specific orders, none of this 'go over there and shoot anyone who moves' stuff) you can then advance the game. You have two options: 'go until event', which means the game continues until something happens (ie forces exchange fire) or 'go until interrupt', which means things carry on unaided until you break in and dish out some more orders.

At the end of each mission you're given a de-brief which tells you if any of your squad have had their attributes upgraded, whether you lost any of the team (which you'll know anyway) and whether you gained any medals.

Missions can be practised any number of times but can only be done 'for real' once. When a mission is completed you won't get the chance to do the thing again – although it's worth noting that there are ways to cheat so that you can. ***Andy Smith***



In the process of issuing orders. In this case, getting a medic across to one of your wounded soldiers is the target you want achieved.

GRAPHICS AND SOUND

Everything is viewed from above with the characters drawn as little stick men. The background graphics are much better, though, and the sound effects are good as well. You'll know by now that great graphics don't necessarily make a great game and the same applies in reverse: naff graphics don't have to mean a naff game.

LASTING INTEREST

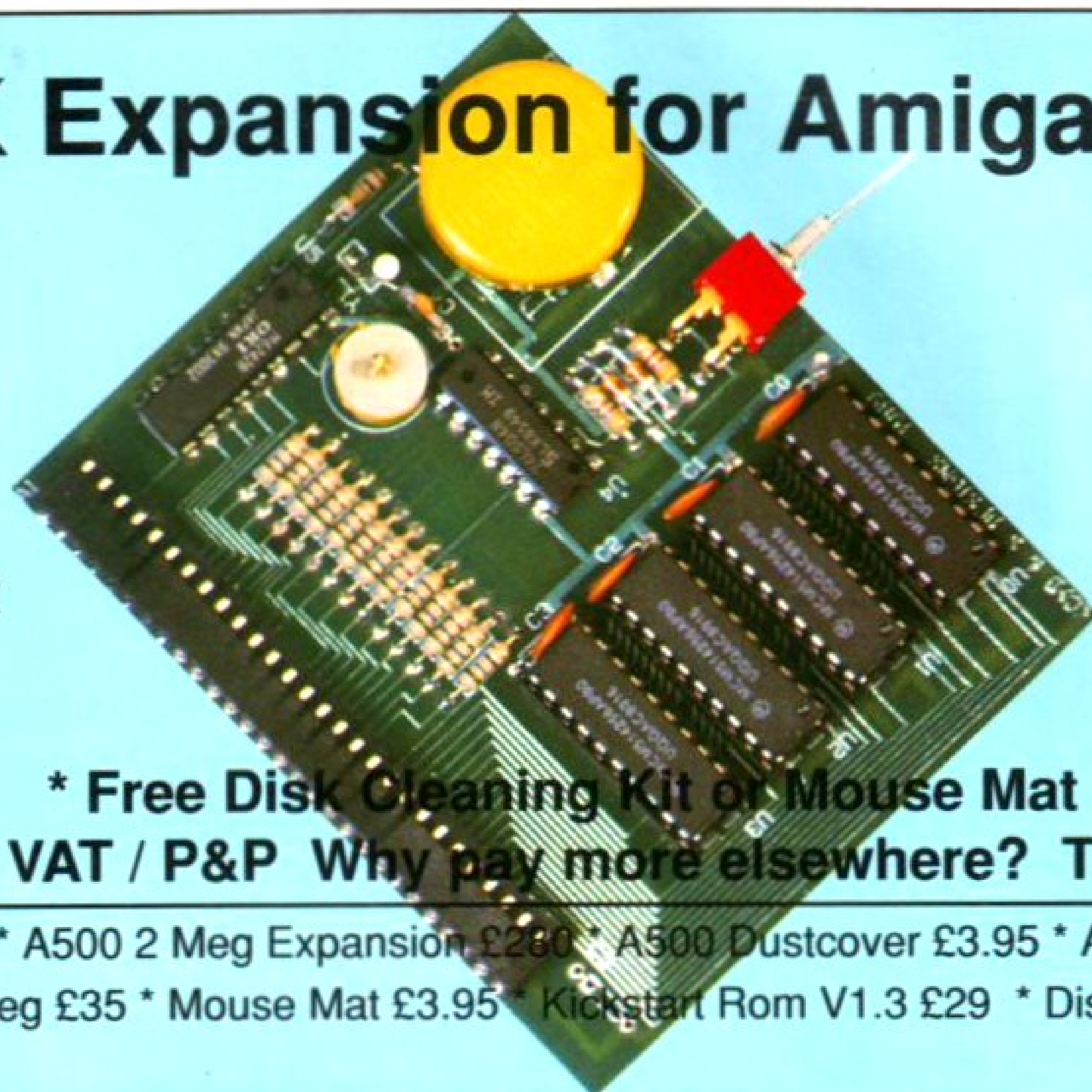
More would have been nice. There are only the dozen missions and there are no skill levels. Although you can cheat and redo missions to improve your performance there's little point. Novices will find it tricky to start with, but others will find the missions slightly too easy.

JUDGEMENT

DF has been nicely done: it has a *Laser Squad* feel to it and, though it's not as good, it will keep you playing for some while. More missions and various skill levels would have beefed it up and improved the game but, that apart, it still works very well and is fun to play.

GRAPHICS	6
SOUND	6
INTELLECT	6
ADDICTION	8
OVERALL	83%

512 K Expansion for Amiga A500



£49.50

* Real Time Clock
*A501 Replacement
*1 Mbit DRAMS

£46.95

* Memory Only
* Disable Switch
* Made in U.K.

*** Free Disk Cleaning Kit or Mouse Mat**

All Prices include VAT / P&P Why pay more elsewhere? Trade enquiries wel-

A500 3.5" Disc Drive £68 * A500 2 Meg Expansion £260 * A500 Dustcover £3.95 * Amiga SCART Lead £7
A590 Upgrades per 0.5 meg £35 * Mouse Mat £3.95 * Kickstart Rom V1.3 £29 * Disk Cleaning Kit £3.95*

Please send a cheque or phone your nearest distributer: 24 Hour order service available. * Same day despatch

DS & K DESIGNS LTD,
Dept AF, Gardener's Row Business Centre
Gardener's Row, Liverpool, L3 6TJ
Tel: 051 298 1666 Fax: 051 298 2074





SPEED COMPUTER LTD
Dept AF, 41 Weymede, Byfleet,
Weybridge, Surrey, KT14 7DQ
Tel: 09323 52277 Fax: 09323 52772

0742 424230



9am to 10pm

STATE OF THE ART



9am to 10pm

0742 424230

Amiga A500

Every Amiga sold includes: WorkBench 1.3, extra disk, tutorial disk all with manuals, full one year warranty and free TV modulator with cables **£340 inc**

Amiga Packs

Batman. Batman the Movie, New Zealand Story, F18 Interceptor and Deluxe Paint II **£355 inc**

Flight of Fantasy

F29 Retaliator, Rainbow Islands, Deluxe Paint II, Escape From The Robot Monsters **£358 inc**

2nd Drives

Enable/Disable Switch Cumana CAX354 **£79 inc**

Hard Drive

A590 20Mb HD with room for 2Mb of RAM **£365 inc**

RAM Upgrade

0.5Mb Expansion enable/disable switch plus £5 for clock **£55 inc**

3.5" Unbranded Disks

DD 100% Certified Labels & Postage

52p each 10 to 50
49p each 50 plus
45p each 120 plus
42p each 500 plus

5th Gear	£9.99
688 Attack Sub	£17.95
A.P.B.	£10.99
Action Fighter	£17.95
Adidas Champ Football	£17.95
Airborne Ranger	£16.99
Altered Beast	£13.99
Antheads (Data Disk)	£19.99
Aquanaut	£17.95
Baal	£9.99
Bad Company	£17.95
Balance Of Power 1990	£17.95
Barbarian 2 (Psygnosis)	£16.99
Bards Tale	£8.99
Bards Tale 2	£17.95
Batman The Movie	£17.75
Battle Tech	£14.99
Black Tiger	£17.75
Blasteroids	£7.99
Blood Money	£11.99
Bloodwych	£10.99
Bloodwych Data Disk	£9.99
Blue Angels	£17.75
Bomber	£21.75
Bomber (Data Disk)	£13.99
Budokan	£17.95
Captain Blood	£4.99
Cartoon Capers	£15.99
Castlemaster	£17.75
Choas Strikes Back	£17.50
Chase HQ	£17.50
Chronoquest	£14.99
Cloud Kingdoms - Special Offer!!	£11.99
Colorado	£17.50
Conqueror	£17.75
Continental Circuit	£13.95
Crack Down	£16.99
Crazy Cars 2	£17.99
Cyberball	£14.49
Damocles	£17.95
Dan Dare 3	£14.95
Dragons Breath	£17.95
Dragons Lair (1Mb)	£26.99
Dragons Of Flame	£17.95
Dungeon Master (1Mb)	£16.99
E-Motion	£16.99
Escape From The Planet Of The Robot Monsters	£14.99
Escape Singes Castle	£28.99
F16-Combat Pilot	£17.75
F18-Interceptor	£17.95
F29-Retaliator	£17.95
Falcon	£19.99
Falcon Mission Disk	£14.99
Fiendish Freddy	£20.99
First Contact	£16.99
Future Wars	£17.95
Ghost Busters 2	£16.99
Gold Of Americas	£17.99
Gore	£17.99
Grand National	£16.99
Gravity	£17.75
Gunship	£17.75
Hammerfist	£17.75
Hard Drivin	£14.95
Heavy Metal	£17.75
Hero's Quest	£22.99
Hillsfar	£16.99
Hot Rod	£17.50
Imperium	£17.50
Infestation	£17.95
Interphase	£8.99
Iron lord	£17.95
It Came From The Desert	£19.99
Ivanhoe	£17.95
Jack Nicklaus	£17.95
Jack Nicklaus Courses	£10.99
Keef The Thief	£17.95
Kick Off	£11.99
Kick Off Extra Time	£9.95
Kick Off 2	£13.95
Kid Gloves - Special Offer!!	£11.99
Klax	£16.99
Knight Force	£17.75
Knights Of Crystallion	£21.99
Krystal	£13.99
Kult	£16.99
Laser Squad	£9.99
Last Ninja 2	£17.95
Liverpool	£16.95
Lords Of The Rising Sun	£17.95
Lost Dutchman's Mine	£17.99
Magnum 4	£22.95
Manchester Utd	£17.95
Micropose Scoccer	£16.99
Midwinter	£16.99
Might And Magic 2	£21.99
Millenium 2.2	£11.99
Moonwalker	£17.99
Ninja Spirit	£17.95
Ninja Warrior	£16.99
North and South	£17.95
Operation Thunderbolt	£17.75
P47 Thunderbolt	£17.95
Pinball Magic	£17.50
Pipemania	£17.95
Pirates	£17.95
Pools Of Radiance	£17.99
Powerdrift	£11.99
Rainbow Islands	£16.99
Reach For The Stars	£17.95
Resolution 101	£17.50
Return To Atlantis	£17.50
Risk	£14.75
Robocop	£17.50
Rocket Ranger	£16.95
Roger Rabbit	£8.99
RVF Honda	£16.99
Seven Gates Of Jambala	£10.99
Shadow Of The Beast	£22.50
Shadow Warriors	£17.95
Sim City	£21.95
Sim City Editor	£11.99
Space Ace	£28.95
Space Rouge	£20.99
Speedball	£16.99
Star Trek V	£24.99
Steel	£9.99
Strider	£17.95
Stunt Car Racer	£17.95
Super Cars	£15.99
Switch Blade	£14.99
Swords Of Twilight	£17.50
Test Drive 2	£17.95
TD2-Supercars	£10.99
TD2-Musclecars	£10.99
TD2-California	£10.99
The Cycles	£17.50
The Lost Patrol	£17.50
Their Finest Hour	£21.99
Theme Park Mystery	£17.95
Third Courier	£17.50
Time & Magic	£10.99
Tower of Babel	£17.95
Triad 2	£13.99
Triad 3	£21.99
Turbo Outrun	£17.95
TV Sports Basketball	£19.99
TV Sports Football	£17.99
Ultima V	£19.99
Ultima VI	£22.95
UMS II	£17.95
Untouchables	£17.50
Vindicators	£9.99
Warhead	£17.95
Wipeout	£15.99
World Cup Soccer 90	£17.95
X-Out	£15.99
Xenomorph	£17.50

Joysticks & Other Bits

Multi Coloured Cruiser	£10.99
Quickjoy III Supercharger	£11.99
Quickjoy Superboard	£15.99
Competition Pro Extra-Clear	£12.95
Star LC10 Printer	£159.99
Star LC10 Colour Printer	£201.95
Superpic Genlock & Digitizer	£469.99
TV*Text Professional	£89.99
TV*Show 2 The Best Ever!	£59.99
Video Titler	£74.99

State Of The Art
has someone to answer your call from 9am to 10pm.
Ring now for the best service around.

We run an Amiga Club. To join just give us a ring and even better prices will be yours on all hardware and software.

Unreleased titles will be sent within 24hrs of release date.

Access or Visa cards are accepted.

TO ORDER SEND POSTAL ORDER OR CHEQUE TO:
FREEPOST
STATE OF THE ART
25 NORWOOD AVE
SHEFFIELD
S5 0QH

It seems that tanks are the 'in thing' as far as games are concerned. After a series of *Battlezone* look-alikes being released, US Gold have come up with a game that simulates not one, not two, but three armoured transport systems.

Heavy Metal places you as a cadet in the US Officer Training School, where you will learn how to control an M1A1 Abrams Main Battle Tank (MBT), an Air Defence Anti-Tank (ADAT) and a Fast Attack Vehicle (FAV) as well as tactical forces in a battle scenario.

Only Second Lieutenants and above can enter the tactical stage, so your first step on the ladder is to qualify for promotion by proving your worth in combat simulations using all three vehicles.

Once you have been promoted you can select the tactical section, where you have the three units under your control as well as a fourth support unit, which can be any of the vehicles.

You must deploy your forces and engage enemy troops in an attempt to stop them reaching your HQ. Once all your forces have been defeated or immobilised you are taken to the debriefing room, where the General gives an appraisal of your performance.

New recruits usually find themselves receiving the hard edge of his tongue, but eventually you may be promoted to Five-Star General and outrank him, which should soften the General's approach! ***Maff Evans***



Steering carefully through the enemy munitions dump in your speedy Fast Attack Vehicle.

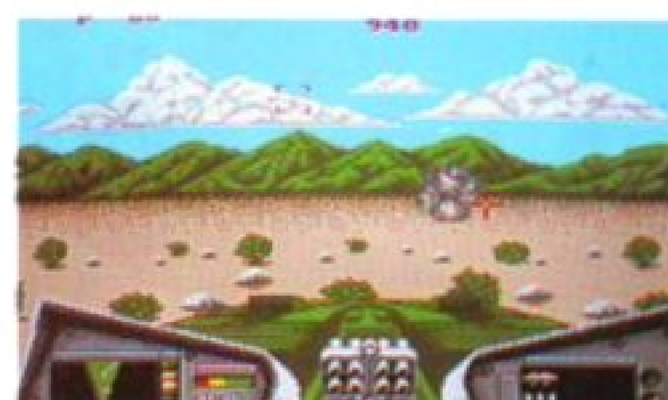


Use the tank's laser targetting to home in on that gun emplacement.

HEAVY METAL

US GOLD £24.99 ■

Mouse and Joystick



The ADAT cannons blaze and – WHAM! – another enemy tank bites the dust.

GRAPHICS AND SOUND

The presentation of *Heavy Metal* is very good, with an effective animated introduction and some extemely tough-looking intermission screens. However, the actual in-game graphics vary from good to all right. The ADAT screen is the most impressive, with a well-drawn display and smooth scrolling and animation, but the MBT section has a rather simplistic look, with simple wire frame graphics used to portray the surrounding proceedings. There is a solid option, but this only works for the scenery, not for enemy vehicles. The sound doesn't really make much use of the Amiga's capabilities, sounding more like that old 8-bit warhorse the Commodore 64.

LASTING INTEREST

The three simulators are in essence three different games, requiring a completely individual approach and use of tactics. Even if you manage to beat the three individual sections, there is the tactical game which takes more thought and planning before you can overcome the odds and beat the enemy forces, no matter how skilful your driving and shooting may be.

GRAPHICS	6
SOUND	4
INTELLECT	5
ADDICTION	7
OVERALL	77%

JUDGEMENT

Despite some rough edges in the audio-visual department and some annoying delays while playing the game, *Heavy Metal* isn't a bad combat simulation. The three sections are tough to master and present a fair challenge when combined in the strategic element of the game, especially when you're outnumbered almost two to one! The feel is more 'arcade' like than straight wargaming, making the game easier to get into than some of the more complex simulations available – a fact that may repel strategists but will be welcomed by blast fans. But both these groups may find *Heavy Metal* a bit of light relief from their usual games.

THE VEHICLES



Air Defence Anti-Tank

This high-tech monster is armed with automatic laser-tracking missiles to take out planes and a 30mm cannon for blasting jets and tanks. The missiles are about 90% effective, but the enemy attacks in waves and the missile can only pick out one target at a time. Also, the missiles are only capable of Ground-to-Air flight, so be ready with your cannon!

Main Battle Tank

In this section you control the tank from both the Gunner's and the Driver's positions. The automatic Laser Targetting System picks out enemy positions and gives you the information you need to home in and blast them. Be ready to use a smokescreen, as the enemy has a similar targetting system.





Fast Attack Vehicle

Looking rather like a beach buggy with guns, this vehicle is designed to penetrate enemy defence areas very quickly to inflict as much damage as possible on their vehicles and equipment in a short space of time. Watch out for tanks and Gunships, as the FAV isn't very heavily armoured.



End-of-level Bosses comes in all shapes and sizes – there are killer caterpillars and trees among others. The one thing they have in common is their irritating habit of mole-murdering.

IMPOSSAMOLE

GREMLIN £19.99 ■ Joystick

The animal with the vision problems is back and this time he's brought an extra eight bits with him. Monty Mole has finally found his way over to the big boys Although the game itself has not been out on the Amiga, the feel certainly has. You have to horizontally scroll your way through four scenes – the Klondike, the Orient, the Amazon and Ice World – before qualifying for the final level. The main obstacles in your path are beasties who you may be forced to duff up.

With a lot of the beasties – the grey birds in the Klondike (they might be bats) or the puffins in Iceworld (!) – there's little point in attempting to ruck them unless you've picked up some additional weaponry along the way. Your best bet is to spread your cape (they've given Monty a cape) and attempt to jump, fall or fly over attackers.

Jumping and falling, you ask? There's a glut of it. Most of your time is spent off ground, mainly because many of the surfaces 'pon which you might land are treacherous in the extreme: moving rocks, sinking rocks, nasty oozey chemical-looking gunge and spears which do to a mole that which was done to Perkin Warbeck (he was lowered onto a red hot poker so that... you get the idea).

Once you've sorted out the jumping then you've got plenty of bits'n'bobs to pick up along the way. Because you play the game with one life, but are capable of taking several hits, you should keep your eyes out for some life-sustaining food. This comes in the form of worms, ice creams and other nosh (now normally opening a can of worms is the last thing you'd want to do but there you have it... a funny old game). Also be on the look-out for jewels, lumps of gold, coins and anything else dosh-like which might come in handy if you have occasion to meet a shopkeeper along the way.



The five stations of the mole. Get through the first four in any order and you're ready for the Bermuda Triangle.

Whoops! In the words of the immortal Parker, "Looks like you're stuffed, m'lady". Some puzzles only have one way in and one way out: Monty blew it this time... Now wait half an hour for the game to reload.

After making your way through the initial four scenes and biffing the end-of-level guardians you get a crack at the Bermuda Triangle – to win this you have to sing it better than Barry Manilow. No, seriously, if you have the patience to achieve the feat then it is Bermuda ahoy. ***Tim Smith***



Beware of small oriental-looking charcters bearing cameras. The guy standing next to moley might only appear to be here for frustration value but, when the proverbial hits the fan, who knows...?

GRAPHICS AND SOUND

Graphically, *Impossamole* does its duty with no real quibbles to be had. It is certainly not up to the "Crivvens look at that for some mind bending imagery!" standard, but who needs their minds bent when you've got small bear-chested chappies with attitudes bearing down on you? The backgrounds themselves are fine: nothing to complain about or to get overly excited about, for that matter. There are the occasional perspective changes in the form of trees and spears going behind then in front of you – jolly stuff but nothing to get agitated over. Monty himself is drawn with what an art critic might say was a "sympathetically cartoonesque style" – in other words he's cute as a box of two-week-old kittens in soft focus.

The soundtrack changes from an introductory drum machine, scratch and stiff blast to a weirdly lilting game tune. Of course, if it's not your bag there's always the Walkman. Monty's death throes, it must be said, sound less like the passing of a hero and more like the final moans of a prima-ballerina.

LASTING INTEREST

How do I put this? Not very much, really. Although the gameplay is standard stuff it lacks the thought required by something like *Rick Dangerous*. After a while you will find yourself blasting through creatures purely to get to the end of the screen and not really caring whether or not you make it just as long as you can say that you've seen the end. This stream of impatience is added to by the fact that the death of the mole finds you twiddling your thumbs or making three cups of coffee while the game gets itself together once again. This does nothing whatsoever for the concentration and peps up the irritancy factor eleventy-five per cent. The loading screens are blank, grey areas with nothing to keep you amused.

JUDGEMENT

All in all, a game for the young at heart and patient of nature. There's lots to do and little thought required to do it. It doesn't take too long to suss out who can and who cannot be beaten to a pulp with ease. The additional weaponry which you chance upon every so often seems to have a life-span close to that of a mayfly at a frogs' convention. One of those games which you might play from time to time just to see, but not one which you would rummage through your collection for. A nice effort, a cute character and some passable gameplay.

GRAPHICS	5
SOUND	4
INTELLECT	4
ADDICTION	4
OVERALL	60%

As many as you like from £ 4.99 Each

32 Only — Rec Price £29.99 ONLY £9.99

70 Only — Rec Price £29.99 ONLY £9.99

431 Only — Rec Price £19.99 ONLY £6.99

46 Only — Rec Price £24.99 ONLY £4.99

193 Only — Rec Price £24.99 ONLY £6.99

97 Only — Rec Price £19.99 ONLY £4.99

74 Only — Rec Price £69.99 ONLY £14.99

50 Only — Rec Price £24.99 ONLY £9.99

107 Only — Rec Price £24.99 ONLY £6.99

132 Only — Rec Price £24.99 ONLY £6.99

Ver 2.0 — 62 Only — Rec Price £49.99 ONLY £29.99

77 Only — Rec Price £99.99 ONLY £29.99

120 Only — Rec Price £19.99 ONLY £12.99

62 Only — Rec Price £24.99 ONLY £4.99

103 Only — Rec Price £24.99 ONLY £4.99

57 Only — Rec Price £24.99 ONLY £6.99

70 Only — Rec Price £24.99 ONLY £9.99

WAREHOUSE CLEARANCE OF NEW SURPLUS *AMIGA* SOFTWARE

WICKED PRICES

- **TOP TITLES** chosen by our experts. Many were in the charts just weeks ago.
- **LIMITED QUANTITIES** The number shown beside each title is all that we have managed to buy so **order today.**
- **MASSIVE SAVINGS** you could save over £60 with your very first order.
- **NO COMMITMENT** we are not a "Club". Our bargains are genuine "NO STRINGS" deals. You buy only what you want when you want,
- **LOTS MORE** Far more than we can show - place your first order with us, to receive our MEGA BARGAIN list, plus a preview of our next advert.
- **GUARANTEE** Every title is covered by our NO HASSLE replacement guarantee.

No Trade Enquiries Please



Order by Phone

(0782) 204639 with your credit card or **BY FAX** if you like on **(0782) 202269**

or **Post** the coupon today - but HURRY - at our incredible prices we expect to sell out FAST. To avoid disappointment please indicate your 2nd & 3rd alternative choices if possible.

OR CALL AT YOUR LOCAL *Software Superstore*



Hanley — 11 Market Square Arcade, Hanley **STOKE ON TRENT**



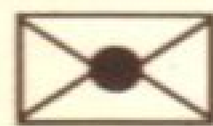
Stockport — 6 Mealhouse Brow (off Little Underbank) **STOCKPORT**



St Helens — 27 BALDWIN STREET **ST HELENS** Merseyside



Sheffield — 6 Waingate **SHEFFIELD**



SOFTWARE SUPERSTORES LTD
Unit 7a Oldham St., Hanley
STOKE-ON-TRENT ST1 3EY

Name .... Block letters
Address ....
....
.... Post Code ....
Card No ....Expires /

TITLE	COMPUTER	PRICE
AF/JN All orders add Post & Packing		0.95
	Total	

for Europe add £3. Outside Europe add £5



A lightning flash crackles to herald the arrival of a couple of the baron's henchmen. Looks like it's time to get the guns out!

Set a thief to catch a thief: that's the current rule in crime-busting. Resolution 101 was passed in January 2038 and it instantly allowed criminals held in state prisons the chance to gain themselves amnesty and freedom by helping the state. In effect, that means sending them out on a mission to terminate an even more dastardly criminal than they are themselves.

You are one such criminal in search of a pardon, so with your licence to kill in one hand and the keys to your Theta 4000 ground skimmer in the other you head off to prove you are worthy to rejoin society. Your mission, then, is to track down and terminate four drug barons operating in the small southern city of Los Envegas. Each baron controls a certain sector of the city and dealing with them involves destroying their henchmen and drug runners and collecting the red capsules of drugs they drop. Once you've collected a set number of the capsules you can go after the baron – destroy his ship and you can move on to the next sector.

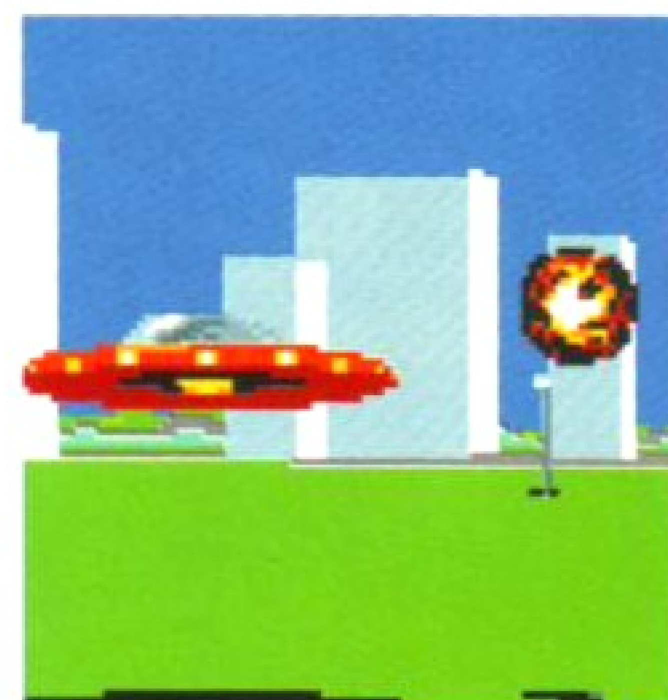
The baron won't be defeated, though, because he's got his vehicle covered by insurance which means he can be destroyed on three separate occasions before he finally lies down and dies. This effectively makes the game a twelve-level affair, with each baron being 'killed' three times.

Your vehicle is also insured, but you can be destroyed four times. You can up your insurance rating (gain another life) by collecting the yellow capsules which are dropped occasionally by the baddies (four for a life).

The game is viewed from the cockpit of your skimmer, which is divided into a large window through which you watch all the action that's happening around you, and below that an instrument panel containing your radar (which can be set on enemy or shop mode, more about the shops later)



The shop, where all you need to battle the drug runners can be bought for mucho moolah.



A homing missile is just about to destroy an enemy saucer. Get ready to pick up the contraband he's about to drop.



Collect the baron's money cases to spend in the shops, but don't hang about or that drone will make off with the wonga before you get there.



Whop a few homing missiles out to battle these crawling pests, before they creep under your defences.



Another baddie bites the dust. Pick up enough of these red pods and then locate the white dot on your radar which represents the baron – then you can blast him.



Two saucers swoop in on your hovercar. It's time to put up or shut up so blast them away! A homing missile would be nice...

THE FOUR EVIL DRUG BARONS



JAKE JOUKOWSKI



TOBY KOMAZUKI



LORD CAMAMILE



JOHNNY PSYCLOPS



The baron makes a fleeting appearance. Got all the dropped drug cannisters? Then keep on his tail and let him have it!

and several other bits and pieces designed to make your vigilante life a bit easier.

Initially you're armed with a front-firing machine gun, which is OK to start with, but once a baron has gone down he'll start rebuilding his forces and equipping them with more destructive firepower. To compete you'll have to start thinking about visiting the shops and buying yourself some upgrades: missiles, cannons and speed booster pods. These all cost money, of course, so it's fortunate that enemy skimmers carry wads of dosh – if they're not carrying pods – which you can collect and spend.

As well as returning your fire, the enemy skimmers drop bad pods which can cause severe damage to your skimmer if you're foolish enough to pick them up. Then there's the time limit – enough drug pods have to be collected before the baron completes his current drugs run, because if he makes it you lose one of your lives.

Shoot around the place taking on anything that moves, collect the pods and money and go for the baron. Make it to the end of Level 12 and you'll have earned your freedom. ***Andy Smith***

GRAPHICS AND SOUND

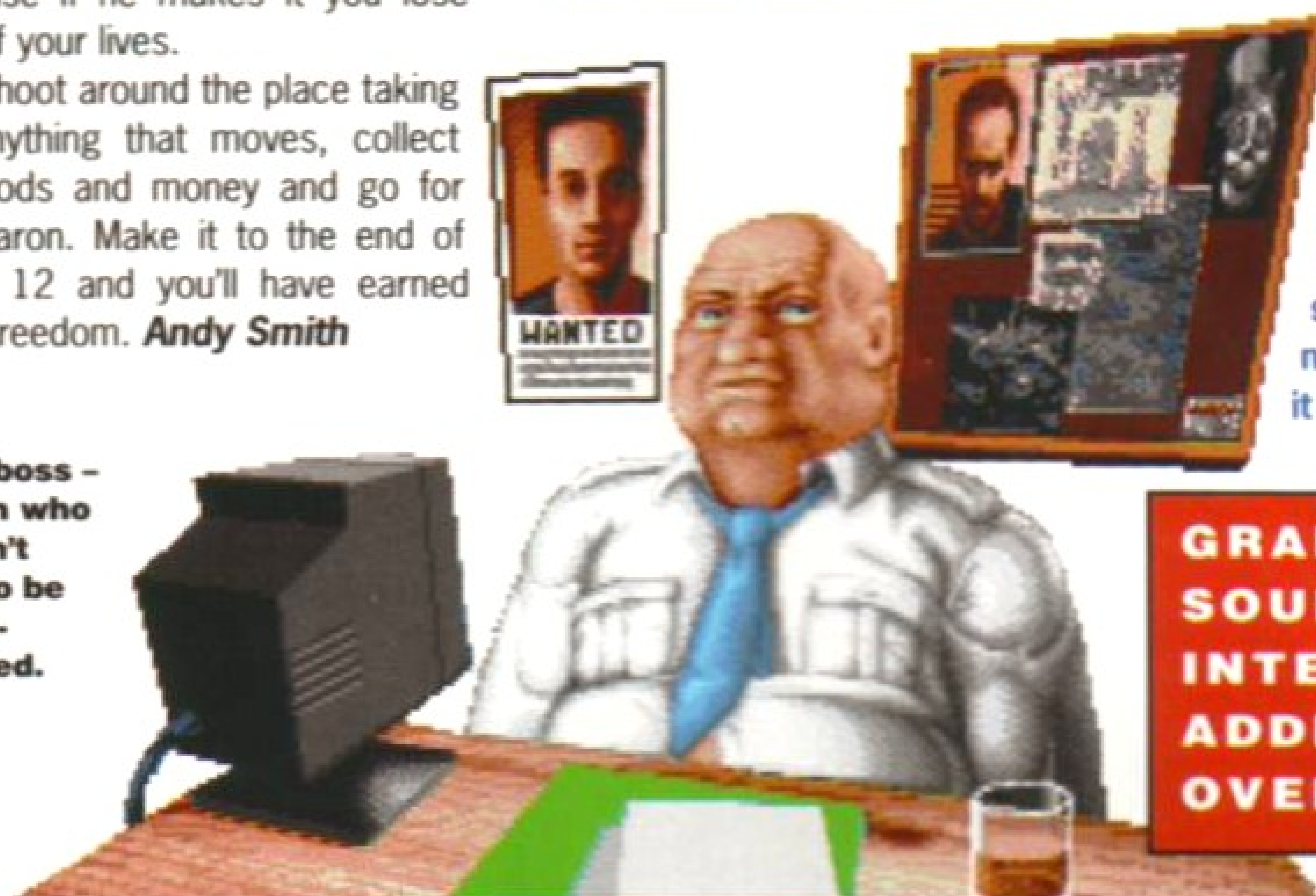
We must point out the version we reviewed had no music or effects, but Millennium assure us both will up to the standard of the graphics – which are very good indeed. The filled 3D moves around extremely quickly and though the enemy ships are a little basic they are well animated. A very fast, very good-looking game.

LASTING INTEREST

Lose a life on a level and the whole thing has to be started again, which makes life difficult. There is the option to save the game at the end of every level, though, to balance things out. Considering the vast numbers of enemy ships that must be destroyed and the length of time it takes to earn enough money to buy upgrades, this is going to keep you skimming around and blasting for some time.

JUDGEMENT

Very good graphics, the game plays very well and it's a fun blast-em-up. Things start to get a bit repetitive, though, and it's not until you start exploring the world of when to go for money rather than drugs that things pick up again. It hasn't got the legs to make it into the Format Gold league, simply because it needs more variety. But it has a damn good try.



Your boss – a man who doesn't like to be disappointed.

GRAPHICS	9
SOUND	N/A
INTELLECT	6
ADDICTION	8
OVERALL	87%

THE DASHBOARD

ARMOUR STATUS – Displays the strength of your outer defences

LOCAL RADAR – Shows all objects in the vicinity

DIRECTION FINDER – Points towards the nearest drug runner or shop

CITY MAP – Shows activity of all characters throughout the city

CONTRABAND COUNTER – Shows the number of packages to be collected

WEAPON INDICATOR – Informs you of the currently selected weapon

COMPASS – Displays your current heading

RUN COMPLETE WARNING LIGHT – Flashes as the drug runner is about to complete his run

CBTV LINK – Shows the reaction of the drug runner when hits are scored

RESOURCES – Gives a readout of your cash reserves (in American dollars)



RESOLUTION 101

MILLENNIUM £24.95 ■ Mouse or Joystick


The first of many timing problems. Wait for the green platform to swing towards you...


...move onto it, wait in the middle until it swings over the other platform, then make a run for it.


The start of the first nine sectors.

ROTOX

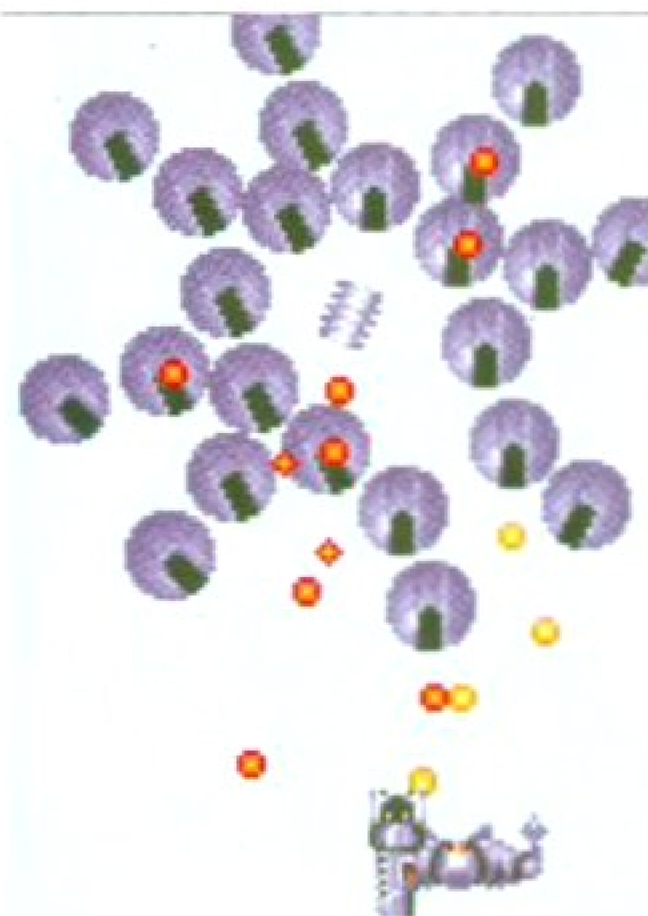
US GOLD £24.99 ■ Joystick

In the 22nd Century our alien enemies are becoming pretty sophisticated, so we're having to alter our thinking to keep up with them. That's why the Cyborg Research Facility was set up – and this time they've got something special up their sleeve.

Lieutenant Kowalski, a trooper in the elite marines, has been badly injured in a battle on Titan. Rather than just patch him up and send him back out, the boys at the research facility have decide to re-build him as a computer-assisted fighting machine.

Extensive tests need to be made on Kowalski, re-named RemOTe Offworld Xenoprobe (ROTOX), before he goes back into service: so he's been shipped off to Neptune to the new testing complex. Which, naturally, is where you come in.

Rotox is a single-player puzzle shoot-em-up and is, as they say, viewed from above. You have direct control over Rotox, who is centred in the screen, and you must battle through ten levels each made up of nine sectors.


There's a bonus weapon in the middle of all those guns, so close your eyes and get in there.


Greeted by a wave of aliens and a gun emplacement, it's already time to test your weapons.


An extra weapon's been picked up so taking out the gun emplacements is easier.

Complete a set of nine sectors and you then move onto another level and another nine sectors. On each sector there is a specific number of enemies to destroy, including flying aliens in waves and gun emplacements. Destroy them all and the screen flashes to let you know the job's done. Then you can move on to the next.

This is where things tend to get much trickier because moving between the sectors is far from easy. There are thin walkways to negotiate (if you're lucky) as well as revolving, sliding and disappearing platforms to cross.

Destroying the aliens and moving from sector to sector can be made easier if you manage to pick up extras such as missile launchers and jet-packs. These aren't always enough, though, because the aliens come thick and fast at times and contact with them reduces your energy, as does falling off the platforms. You have three lives per credit and five credits so getting some way into the game shouldn't be too much trouble. Once you start hitting the higher levels you'll wish you had a lot more! ***Andy Smith***

GRAPHICS	7
SOUND	3
INTELLECT	5
ADDICTION	7
OVERALL	84%

GRAPHICS AND SOUND

The game graphics are a mix between the sprites (of the aliens and Rotox, which are OK, but could be better) and the filled 3D of the platforms (much better) which works very well together. Turn the sound off, though – the effects are dire and only annoy after a while, rather than enhancing the gameplay.

LASTING INTEREST

Getting through the early levels is easy once you've got the hang of staying on the platforms – fortunately, your energy level is not penalised too much for falling off, but the game gives you no favours and puts you back at the start of the section. The higher levels are very tough. This will keep you going for some little while.

JUDGEMENT

The puzzle/shooting mix works very well, the graphics work well and the whole game hangs together excellently. More and slightly different puzzles would have made things better, but even so it's a good game that requires a good bit of hand-to-eye coordination. One you'll enjoy working through.

BELOW: More timing problems, here all the platforms move!




Pick up that disk and... woah! Watch out for those cymbals!

LASTING INTEREST

The gameplay starts easily enough, to get you into the feel of things, but soon gets hard enough to challenge the most dedicated puzzle fans. Passwords save the tedium for impatient players, allowing you to concentrate on the more difficult screens – but they have to be earned! The 16 levels get progressively more difficult, making you learn new tactics. Even when all 16 levels have been completed, there is a totally new set to keep you busy for another couple of weeks.

JUMPING JACK SON

INFOGRAMES £19.99 ■ Joystick

Hands up who likes rock music! That many, huh? Well imagine a place where there is no more rock and only classical music remains. Sounds pretty dull, doesn't it? This is the situation in Infogrames' latest 'jolly' offering – remember *Bubble Ghost*? Creaky old conductors rule the world of music with their dusty horns and creaky oboes, keeping lovers of rock music in a state of despair. But there is a solution...

One solitary copy of the King's (Elvis Presley's, dim-wit) first recording still exists, guarded by the classical tyrants. If it could be liberated and brought to the masses, then the world would be a happier, if not noisier, place. Who is the man for the job? Who else but a descendent of Jumping Jack Flash – the one that made it all right (in fact he made it a gas) in the Rolling Stones' classic hit.

Jumping Jack Son must travel through the strange dimension where the recording is kept, revealing and playing any other rock recordings he can find before the classical instruments destroy them. This isn't as easy as it sounds, since the records are all hidden in zones built up of square platforms. Certain sections of the zones have to be turned to the same colour, by leaping on them, which makes a record appear. Jack can then pick it up and take it to the correspondingly-coloured record deck in order to set it playing, building up the tune with drums, bassline and harmony.

Once all the records have been placed on the decks, Jack can go on to the next level. Spirits sent out by the classical tyrants wander around the zones trying to stop him from completing his quest, giving Jack a good biffing if they can catch him.

Jack can drop a limited supply of cassettes in front of his enemies to hold them at bay for a while, as well as picking up items along the way to help him. These include sleeping pills to put the instruments to bed, hard-man rock shades to scare them off or coloured Walkmen for magic powers such as invisibility.

At various stages throughout the game 'challenge' stages appear. On these Jack must find a route through the level to enlarge glass orbs, but each square can only be crossed once. If this task is completed, then a password to higher levels is given. If Jack fails then he gets nowt! ***Maff Evans***


Jack seems to have gone a bit wrong on the challenge stage.


Conveyor belts make the going tricky on the higher levels.

GRAPHICS AND SOUND

Bouncy platform games really need to have bright, colourful graphics and bop-along sound to work. Fortunately *Jumping Jack Son* has both in abundance. The levels are colourful and sprites have a jolly and humorous look. Jack himself is a fine figure of a bubble, with cool shades and a multi-coloured floppy haircut. The overhead platform view is reminiscent of the superb puzzle game *Bombuzal*, but with its own definite character. The 'raunchy' rock music pushes the gameplay along nicely, being more Rolling Stones than Guns 'n' Roses, with a boppy, 'fun' feel to it.

GRAPHICS	7
SOUND	7
INTELLECT	6
ADDICTION	8
OVERALL	81%


These classical instruments don't half put up a fight!

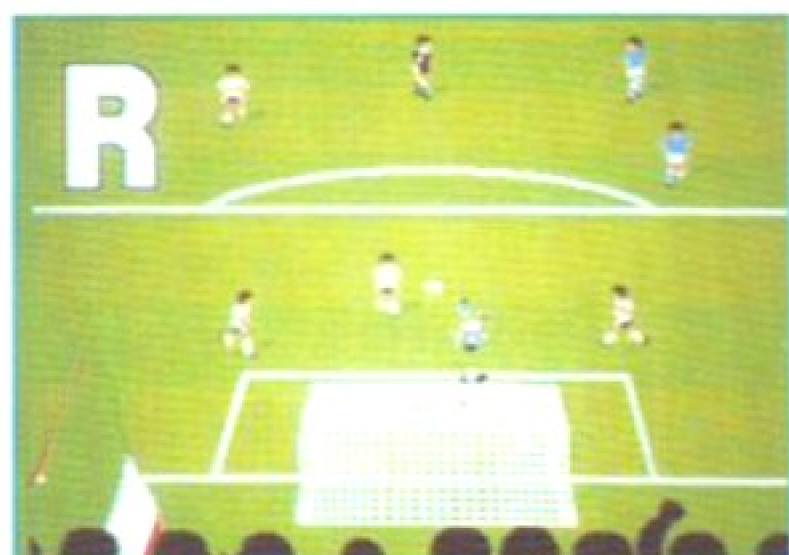
JUDGEMENT

It's always fun to play jolly puzzle games and when they're as well put-together as this it is a real treat. The format is basically a reworking of an old theme, dating to the days of *Q-Bert*, but with enough twists to turn it into an original product. It's not the best puzzle game ever, but the fun presentation and compulsive gameplay make it one well worth checking out. Now, I wonder if anyone can do the same sort of thing for indie music...



One record in place and another one ready to be picked up.

WORLD CUP 90







NO CHANCE TO VISIT THE WORLD CUP 1990 IN ITALY?

Then get ready for the world's most exciting Sports spectacular. With WORLD CUP 90 we give you the chance to challenge the worlds best teams.

UNIQUE PLAYING FEATURES
(Taken from Amiga Version – others may vary)

★ Player vs Player option ★ Up to 4 Players can build two teams and play at the same time (Joystick interface required) ★ Multidirectional scrolling in Overscan mode ★ Replay motion ★ 3D penalty kick ★ There are almost no limits to the gameplay – you can foul, use slide kicks, overhead bicycle kick and many more . . .

GET THE REAL FEELING

AVAILABLE FOR:
AMIGA, ATARI ST Colour Monitor, PC compatible (3.5" and 5.25")
COMMODORE Cassette & Disk



24A WHITE PIT LANE, FLACKWELL HEATH, Nr
HIGH WYCOMBE, BUCKINGHAMSHIRE HP10 9HR
TEL: 06285 31244 FAX: 06285 30875

THE SUPERSTARS OF THE SUPERNATURAL ARE HERE TO STAY!

"The graphics are excellent throughout, the action is accompanied by three neat renditions of the film's soundtracks and all three games are good fun to play."

C&VG, December



"In a nutshel Ghostbusters I is a slick anc highly enjoyable game which will undoubtedly be a monster hit."

ST Action, December



"A great license which puts the movie's action sequences to very good use in three varied and playable levels."

C&VG, December

"Scenes from the film, some of them rather adventurous, have been ingeniously interpreted into very original arcade gameplay..."

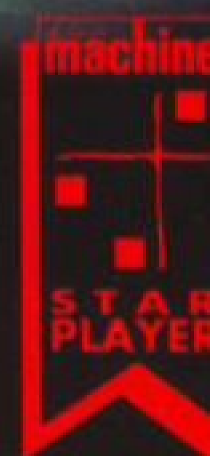
ST Action, December

Mail order:
INTERMEDIATES LTD
PO BOX 847
HARLOW
CM21 9PH
Tel: 0279 600197
CONSUMER ENQUIRIES/
TECHNICAL SUPPORT
Tel: 0734 310003

GHOSTBUSTERS II

C+VG HIT!

ACTIVISION





It's time to see who's the bravest.



The Amoeboid had no chance as Mahoon forced him into the wall.

WIPE OUT

GONZO GAMES £19.99

■ Joystick or Keyboard

Older game players may remember the game *Tron*, based on the film, in which two players rode along on light cycles that left a trail, the idea of the game being to force your opponent into one of the trails. Well, that's the basic idea behind *Wipe Out*. Of course, there's a lot more to it than that.

For a start, the one or two player game is played on Hoverboards, which are like skateboards that float on air. Bouts are contested in an arena, each bout consisting of three sets, each set of three legs. The first player to win two legs wins the set and two sets win the match.

Every match you play alters your position in the league (the number of players in the league depends which planet you happen to be on) and you gain or lose points depending on the outcome. As well as points, money can also be won and lost on the outcome of matches and it's the acquisition of money that eventually allows you buy better boards and travel to other solar systems.

New, improved boards generally have better top speeds, can turn tighter corners and some can even jump trails, which is especially handy when you're in a tight spot. When you start coming up against the better opponents you'll want to give yourself every advantage and have a decent board. You'll also want to pick up extras from the arena if there are any available – they appear at random. These extras allow you to go through trails and even remove a player's trail, but activating them can be a bit tricky, especially if done using only the joystick.

Each season lasts 15 matches and at the end you are awarded a medal if you win the league. To challenge for a higher star rating (star ratings run from 0 to 8) you'll have to jump to a higher-rated solar system in the galaxy and take on their bottom league player.

The game will only allow you to travel to another system if you have more game points than that planet's lowest-rated player, so progress takes some time. To keep things exciting in the meantime you can always jump to another planet in your own solar system, and battle it out on two new arenas. ***Andy Smith***

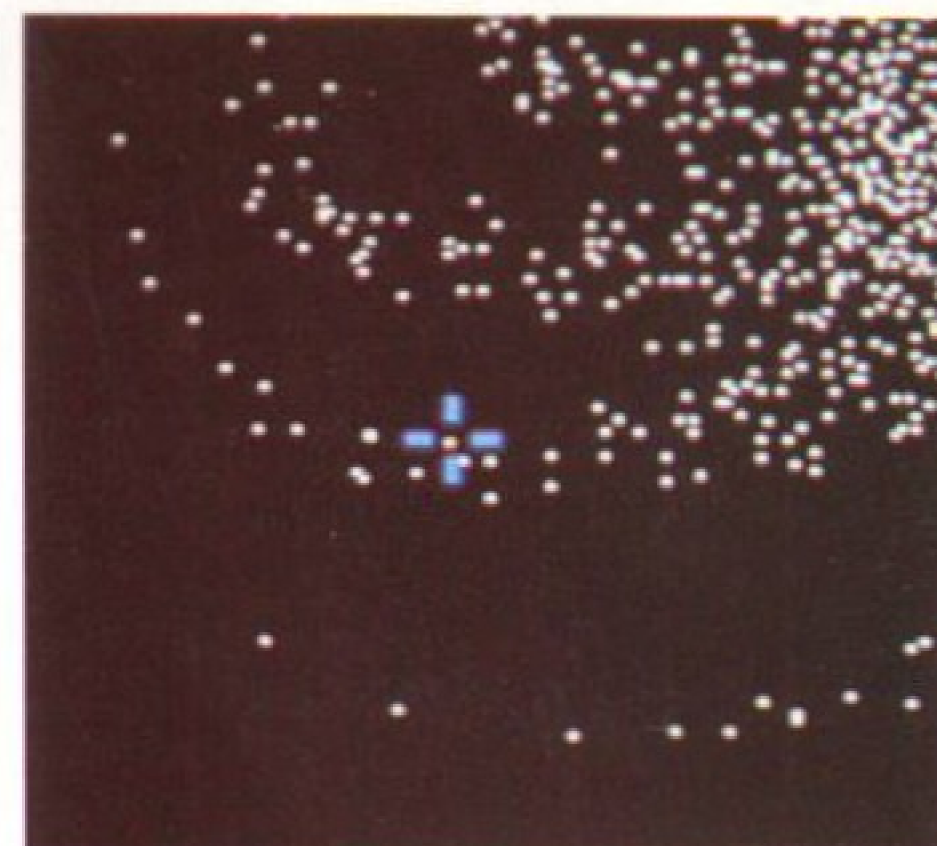
GRAPHICS AND SOUND

There are only a few sound effects which can best be described as all right, but there's also music which plays throughout which is much better. The graphics are not brilliant and they don't move too smoothly giving the game a primitive look. This doesn't spoil your enjoyment of the game, however.



Tricky one, this: you are both playing inside that vertical strip with nowhere else to go.

Mahoon's doing very well at the top of the league with 91 matches played (not all in one season!) and only 19 lost.


Jump to another part of the galaxy and you can challenge a player for a higher star rating.

LASTING INTEREST

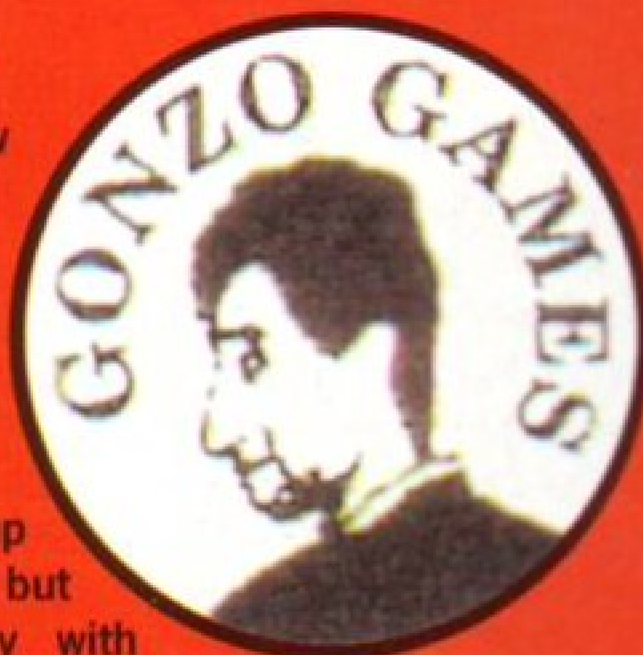
Absolutely loads of it. Working your way up through the ratings will take weeks of play, and just when you think you're getting to grips with an arena and can take on all comers, along comes a better computer player and you have to rethink your tactics all over again. And if you're playing with another human in your league things can really hot up.

GRAPHICS	6
SOUND	5
INTELLECT	6
ADDICTION	8
OVERALL	85%

JUDGEMENT

It's a very tactical game. Not only will you have to have a quick joystick hand for those tight turns, but you'll need your wits about you constantly if you're to win because this is not a game for cowards. Chances have to be taken and you have to go out there and force your opponent into making mistakes, rather than just waiting and hoping he messes up. A good game and a great start for Gonzo – let's hope they keep it up.

GONZO WHO?



Gonzo Games may be a new fully-independent publisher, but the people behind it have been in the industry a long time as developers and programmers under the Viz Design label.

Viz never really came up with an *Elite* or *Tetris* classic, but they gained some notoriety with their games *Werewolves of London* and *Frankenstein Jr.* Their conversion work, which included such greats as *Airwolf*, *Hypersports* and *Roller Coaster*, however, was much better.

Wipe Out proves Gonzo have also got what it takes to make it, so we're waiting to see if they can keep up the good work with their next releases, *Street Hockey* and *Brides of Dracula* due later in the year.



The room of the pumping screws. Not just biffing the living daylights out of droids. You have think a bit too.

HAMMERFIST

ACTIVISION £24.99 ■

Joystick

Big bad company Centro Holographix has taken two human subjects, turned them into holograms (fairly solid holograms, but we'll put that down to artistic licence) and for the sake of economy put them both into one body.

This has obviously irritated Hammerfist, the tall, dark, violent male, as well as Metalisis, the tall, blond, violent female who, by the way, has a kick like a Thai boxer on steroids. They decide to steam into Centro, do the business and leave the place looking like Bournemouth beach after a friendly footy match.

Unhappily the company feels it has a right to stop secondary fighting. They decide to lob in a few guards, the occasional zipping robot, a few traps, the odd giant ant and some militant vegetables in order to protect their property.

Both Hammy and Metty play their own roles in the game. The former is skilled in firing laser bolts from his... er, hammer-like fist – you will need to keep picking up the red power-ups with the Ls in the middle in order for this weapon to function. Failing this, he can use a hammer-action fist. This latter weapon is handier than you might think – some of the stooping, white-overalled guards will duck laser fire.

Metalisis is no slouch herself. While Ham-the-man is beefy, he is no good at all at leaping onto higher levels or moving at any speed. Metalisis is highly reminiscent of Daryl Hanna's high-kicking, flick-flacking android from *Blade Runner*. She also comes armed with side kicks and a pretty neat line in ducking and jumping.

Moving between characters is simple enough, you just push the joystick up and shazam! Each of the characters then has their own moves and weapon manipulation – a handy little ID card fills you in on this lot. Once you've got the moves sorted out it's time to get into the fray. Each screen you meet comprises a number a enemies, maybe a puzzle or two and some computer screens to head butt. Once certain of the screens have been busted and a few droids wasted, the security on the room will have been breached and it's time to move on to the next.



These two little droidettes provide Metalisis and Hammerfist with hours of fun and also some more power-ups.



Feeling tired, run-down and low? Use new, simple re-energiser ports. Be careful not to blow your own brains out, though.

Each guard, droid, terminal or vegetable destroyed provides power-ups, energy or weapons but beware, the Master is also watching you. Occasionally, when his (or it might be a her) energy is built up, each of the power-ups becomes a deadly skull-faced anti-matter blob. Avoid these at all costs. You should also be aware of the re-charging stations along the way. Plugging into these follows the same routine as terminal bashing. Again watch out, you may well send too much charge up your central circuits and end up by frazzing yourself – game over!

With all this going on you might think that death would come quickly, but far from it. *Hammerfist* has the luxurious edge in that it allows you to play and play for hours on end. Every time you look like dying, you head back to the recharging point, find yourself a strategic spot and stand there blasting the foe. Relax for a while in a secluded storeroom and catch your breath. Once you've rested up, it's back to the fray with a vengeance. Playing with a little thought and some skill you could keep going for days. ***Tim Smith***



The car mechanics with the winky baseball caps mean mean business. Do it to them before they do it to you.

GRAPHICS AND SOUND

Nice bit of scrolling here. All very smooth with no jagged edges which suddenly make you realise that you're not in fact there but are in a small bedsit in East Molsey. The flick-flacks of Metalisis are particularly joyful to watch as are the exploding backgrounds. Nothing appears static for too long which gives a pleasantly manic feel to the whole thing. The soundtrack is fairly work-a-day, nothing to write to *Smash Hits* about. The effects are also passable with the odd explosion and rather emasculated laser burst.

LASTING INTEREST

Tons and tonnes of it. Because you can keep playing for hours, you can really explore those rooms and work out some tactics. This latter point, tactics, raises *Hammerfist* from a basic horizontal scrolling hack'n'slash to a different level of gameplay. When the Master becomes active, there is no point in blasting for power-ups, you have to think a little. Each screen provides its own difficulties, each puzzle it own solutions. Great stuff.

JUDGEMENT

At first sight you could be fooled into thinking that *Hammerfist* was merely another bish, bash, bosher. It is possible to play it like that. But don't be fooled. Reflexes are taxed to the limit and brain cells are not left to atrophy. Reaching the end of this outing is certainly not the easiest task in the world and for once you really do want to reach it. One problem did crop up in the 'Room of the pumping screws' – if you fall off one of the platforms there's there's no way of getting back – you don't die, but you're not on screen either. Aside from this, *Hammerfist* is definitely a game to keep you busy for a very long time.



Watch those power-ups fall from the sky. Beating things up can be profitable – just ask Ron and Reg Kemp.

GRAPHICS	8
SOUND	5
INTELLECT	8
ADDICTION	9
OVERALL	89%



KICK OFF 2



BLISTERING PACE – PIXEL PERFECT PASSING – SUPERB TACTICAL GAME PLAY

KICK OFF 2 greatly enhances the game play of KICK OFF, winner of THE GAME OF THE YEAR award in U.K. and similar awards right across Europe. A host of new features have been added to the ones that enthralled the players the world over.

Full size multi directional scrolling pitch with the players, markings etc. in correct proportion.

1 to 4 players (Amiga & ST only) option.

2 players TEAM option against the computer or 2 other players.

Hundreds of players, each with a unique combination of attributes (Stamina-Pace etc.) and skills (Passing, Shooting and Tackling etc.)

Instinctive Kick Off joystick controls to dribble, pass, shoot, head or chip a ball and do sliding tackles or scissor kicks.

After Touch controls to bend or dip the ball.

Set Piece Free kicks including dummies to chip the ball or bend the ball round a defensive wall.

9 types of corner kicks with full control of shot power. Long and short Throw In.

Team selection from a squad of 16 with substitution and choice of tactics.

League and Cup competitions with extra time, injury time and sudden death penalty shoot out.

Facility to view, edit and save the action replays and create Golden Shots disc.

Kit design – 6 styles and 32 colours. (Amiga & ST only)

Facility to load Player Manager teams for a single game or league game.

Load your own designed Tactics from Player Manager.

Red & Yellow cards, 16 different referees, Injury time and host of features to create the atmosphere for a game which is a real fun to play.

Special Events provision to load Data Discs or Cassettes for events like World Cup, European Cup etc...

Restricted features on IBM and 8 bit machines.

AMIGA & ST £19.95
IBM (AT & XT Turbo – CGA, EGA & VGA) £24.95
CBM 64 – SPECTRUM – AMSTRAD £9.95/£14.95
SAM COUPE – £10.99/£14.99


AMIGA SCREENSHOT'S

ANCO

ANCO SOFTWARE, UNIT 10, BURNHAM TRADING ESTATE, LAWSON ROAD, DARTFORD, KENT.
TELEPHONE No: 0322 92513/92518 FAX No: 0322 93422

STORM ACROSS EUROPE

SSI/US GOLD £24.99 ■ Mouse

The strategic map showing the whole game area after the first round.

Latest in a long line of SSI games to reach these shores from the States is this one, two or three-player wargame simulating the war in Europe from 1939-45. Wargamers will instantly realise the scale of such a simulation and be wondering if it is not, perhaps, a little too ambitious.

Players take on the responsibilities of commanding either the German, Allied or Russian armies, navies and airforces and also must concern themselves to a lesser extent with managing their home country's economy and production. In one-player mode, the player must automatically take control of Germany.

The game is played in turns, with several phases making up each turn. The issuing of orders is usually on a very grand scale, very often involving selecting and issuing orders to whole divisions at once. The game world is divided into 37 countries and sub-divided into 224 strategic areas.

Each turn lasts 3 months of game time and the amount of orders you're allowed to issue during any one turn depends on the season – less orders during the winter in some parts of the world. Orders include attacking a neighbouring sector or country, transferring divisions to different areas, sending subs and battleships (among others) out on patrols or raids, organising air strikes against enemy installations or enemy armies and creating or removing armies.

Generally everything you wish to do for that turn has to be done and then 'Combat' selected, which moves the game onto the combat phase and hopefully your armies go goose-stepping all over the place. Then it's the next player's turn, so he attempts to do the same and stomp all over you.

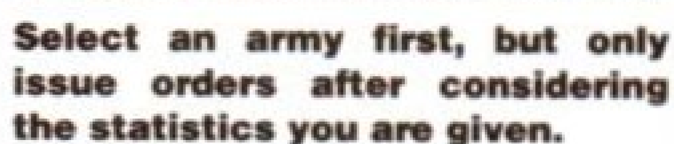
Players can be knocked out of the game if they allow certain sectors to be captured by the enemy, at which point the conquering army takes control of all the vanquished player's land. The game continues until only one player is left or summer 1945 comes round and Germany's position is judged. ***Andy Smith***

GRAPHICS AND SOUND

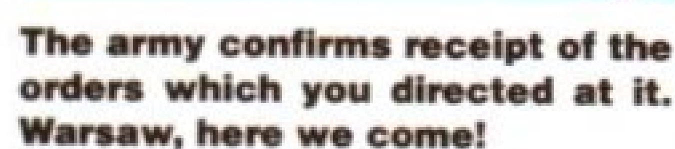
There's a definite C64, Apple II and PC look to most of SSI's games and this is no different. It's very simplistic and unimaginative-looking, but the graphics do their job and the sound effects are not too bad.

LASTING INTEREST

As you might expect, it takes a while to get to grips with and once you have found your feet it takes a while to play each game. There is a multitude of options that can be altered before play to make things easier or harder for yourself, so if you're into this sort of thing you'll have plenty to busy yourself with.



Select an army first, but only issue orders after considering the statistics you are given.

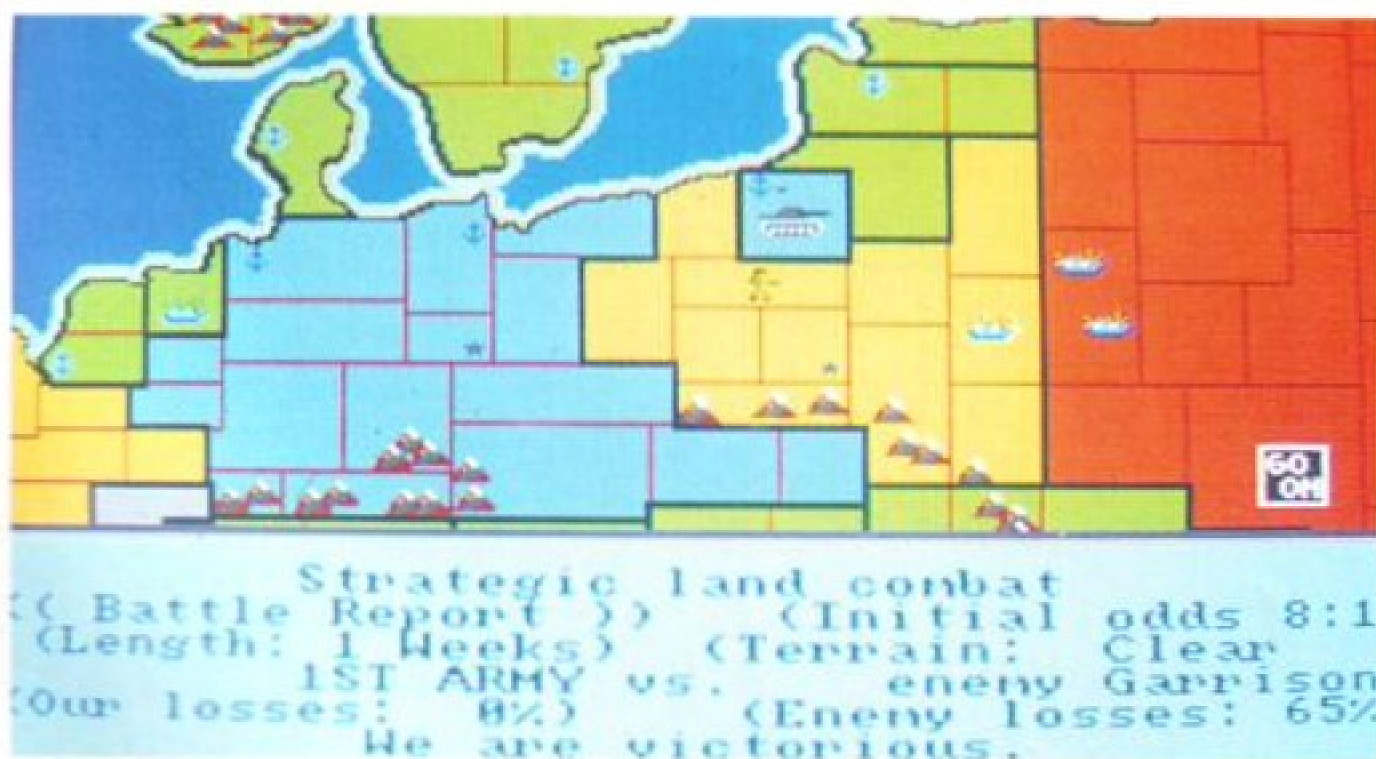


The army confirms receipt of the orders which you directed at it. Warsaw, here we come!

JUDGEMENT

The scale of the game is too large, which doesn't mean it's bad: in fact it's very good and very enjoyable once you get into it. But don't expect it to be as deep as some earlier releases.

GRAPHICS	5
SOUND	4
INTELLECT	6
ADDICTION	7
OVERALL	80%



All the orders are issued and it's into the combat phase where battles are resolved instantly and a report is given to the commander.

Report to the Fuhrer

German Casualty Report Fall 1939

Land						
current	0	34	6	13	2	0
year	0	34	6	13	2	0
total	0	34	6	13	2	0
Naval						
current	0	0	0	0	0	
year	0	0	0	0	0	
total	0	0	0	0	0	
Air/Prd						
current	0	0	0			
year	0	0	0			
total	0	0	0			

GO ON

At the end of the combat phase each side's losses are displayed (which helps you keep track of costly theatres).

FIGHTER BOMBER

ADVANCED MISSION DISC




AMIGA SCREEN


VGA SCREEN


PCVGA SCREEN

Activision proudly presents the eagerly awaited Fighter Bomber Advanced Mission Disc

For those who have taken on the original challenges in Fighter Bomber, there are now sixteen more exciting and demanding missions, with new enemies and tougher artillery.

...A secret meeting of terrorist leaders is taking place aboard a submarine surrounded by heavy SAM defences – with quick wits and sharp reactions you must wipe out the enemy and destroy the whole flotilla without rearming or refueling...

...A civil airport is surrounded by enemy tanks, APCs and troops, with enemy reinforcements approaching from the North. It is likely to be over-run shortly unless swift action is taken. But with only one load of weapons will you be up to it?

Special features:

- Extra stunning graphics – submarines, radar towers, parked jets, windmills, trucks, mobile SAM launchers.
- This one mission disc doubles the enjoyment and thrill of the original Fighter Bomber

ACTIVISION

SIMULATION SOFTWARE



Mail Order: Intermediates Ltd., P.O. Box 847, Harlow CM21 9PH Tel: 0279 600197
Consumer/Technical Enquiries: 0734 310003



The green menace taunts our hero.

Yikes! Dan is grabbed by the Treens.



DAN DARE III

VIRGIN MASTERTRONIC £19.99 ■ Joystick

The 18th of April saw the *Eagle* comic celebrating its 40th Anniversary, featuring the most famous space adventure pilot in history, Dan Dare. To celebrate this event, Virgin have released a third *Dan Dare* game.

The first game was very much a 'search and find' adventure, featuring a comic-style windowing system using many of the characters from the original strip. Digby was there, along with Dan's pet dog and the Treens led by the evil Mekon. The second made a departure from this format and plumped for the more standard scrolling shoot-em-up, with Dan flying around a maze-like Treen complex.

Dan Dare III follows the style set by the second game, being a multi-directional scrolling blast with a fair amount of searching to be done. The game starts with Dan being held by the Treens and about to be tortured with all manner of dastardly implements. Dan manages to free his bonds and give the Treens a good biff in the face to make a dash for it. After finding a jet-pack and a plazma rifle, he heads off to the hangar to find a ship to make good his escape. Unfortunately the only ship in the dock has no fuel, so Dan must search the Treen complex, find enough fuel to fill the tank and blast off.

This is where you come in. You take control of Dan as he starts his quest in the Treen stores. You must fly around collecting additional weapons to take on the mutant forces the Mekon has sent out, which include bouncing bombs, homing missiles, energy shields and even nuclear devices. The end of the stage has a large guardian, either a giant Treen or a gun emplacement, which when shot gives you a pod to gain access to higher levels via the large transporter in the main cavern of each level.

On the higher levels the guardians sit in front of fuel cannisters, each of which contains 10 pounds of rocket fuel. If you manage to collect 50 pounds of fuel, then you can refuel the ship, return to the stores and start up the blast-off sequence. But hurry! Dan has an appointment and it wouldn't do to be late! ***Maff Evans***



Dan dons a jet pack and takes on some big-eared warriors.



Dan uses the last of his strength to reach the transporter pod.

DAREMANIA

The 40th Anniversary of Dan Dare has sparked off a lot of interest among the Science Fiction community. The *Eagle* has relaunched the character in the new-look *Eagle* comic. Gone are the days of the peak-capped, pipe-smoking hero and in comes the new high-tech, weapon-loaded, green, non-smoking, vegetarian soldier. Fans can visit the Dan Dare Exhibition in Southport, home of Dan's creator Frank Hampson, and take a look at how the character has developed. Even a radio series has been broadcast by the BBC. If you missed it, don't worry – the stories are available on cassette.

GRAPHICS AND SOUND

Dan Dare's loading sequence starts with a series of colourful and well-drawn comic frames detailing the capture and subsequent escape of our hero along with some well-sampled pieces of speech. The feel is very much that of the original comic, down to the style of the scenery. Unfortunately, this atmosphere isn't carried into the game.

The sound is pretty standard, with blasting effects and a bouncy background tune, and the graphics are nothing to shout about. The sprites are small and rather flat-looking and lack the animation quality needed to bring a comic strip to life. Dan skates around the blocky scenery rather than running in a macho manner as he should. The appearance is, in all, dull rather than as exciting and vivid as the original strip.

LASTING INTEREST

The game is tough from the outset, killing you off time after time in quick succession. This situation isn't helped by the fact that your weapons run out very quickly and the Treen forces take a lot of shots before they die. Progress is rather slow and frustrating – many players will give up in exasperation before the final objective is reached.

JUDGEMENT

The intro sequence is full of character and gives the impression that you are about to embark on an involved interpretation of the comic strip. Unfortunately the game is just a standard hunt-and-blast episode, with very little to justify the Dan Dare link other than the Mekon sprites at the end of the levels. If shoot-em-up maze games are your 'thing' then you may find some enjoyment in *Dan Dare III*, but if you just enjoy the comic strip character then stick to buying the *Eagle*.

GRAPHICS	5
SOUND	4
INTELLECT	3
ADDICTION	6
OVERALL	67%


An attack from both sides has done for you here. Time to start again.



All ready for action at the start of the quest and two lily-livered baddies cower away from your lethal weapon.

IVANHOE

OCEAN £24.99 ■ Joystick

The nefarious King John was a bit of a rogue in the Middle Ages when good King Richard was away crusading, spreading the good word and killing anyone who wouldn't listen. It was a time of legends and of legendary heroes – Robin Hood, the Three Musketeers and the star of this game, Ivanhoe.

As the knight in shining, it's your job to travel to Austria and rescue Richard the Lionheart from his imprisonment in a castle. That means travelling through five horizontally-scrolling areas taking on all sorts of nasty types who are in league with King John.

Armed with just a shield and a sword it's tough work making your way through the stages, fighting off the magicians who lob fireballs at you, the archers who hide in trees and the thugs who come at you with anything they can get their hands on.


Jump up in the air to grab that shield and give yourself some extra protection for a while.

As in most hack 'n' slash games, you can use a series of aggressive moves and non-aggressive moves, depending on whether you have the fire button depressed or not. There are also extra weapons to collect by killing certain yobs (like the ones in trees) including a bigger shield and a triple shot which has the strange effect of turning you into three Ivanhoes so you can attack front, back and overhead all at once.

Unfortunately, all the extra weapons have a limited lifespan and you lose any extras once you lose one of your five lives.

Should you make it to the end of a level you are rewarded with the chance of a bonus fight against a large enemy, which gives you an extra life if you manage to slay him. ***Andy Smith***

GRAPHICS AND SOUND

There's been a lot of noise made about the graphics of the game because some of the people who did the cartoon movie Asterix have worked on them. It shows, too, because the sprites and backgrounds are very impressive. Less impressive, however, is the animation, which is slightly jerky. The sound effects and music are somewhat less than awe inspiring.

LASTING INTEREST

This game is murderously tough, so it will take you a while to complete it. Unfortunately all but the most determined players will give up the attempt long before the final screen.

JUDGEMENT

Looks great, plays mediocre. The gameplay is lacking in variety despite the quantity of different areas, so boredom sets in quickly. Sadly, *Ivanhoe* is not up to the high standard we have come to expect from Ocean.


Triple hits in action!

GRAPHICS	8
SOUND	4
INTELLECT	2
ADDICTION	5
OVERALL	52%

PROTECTOR

16 BLITZ/MASTERTRONIC £4.99 ■ Joystick

The US Army fly boy heroes train at Fort Rucker, a school where good pilots get better and bad pilots get dead!

Training's a head-to-head duel against another pilot. The screen's horizontally split with one chopper on either section, each with an *Airwolf*-style base hidden in a volcano in which to re-arm and re-fuel.

The aim is to collect the constituent parts of a bomb scattered around the playing area, drop them one by one back at base, then use the bomb to blast the other guy's base back into the desert. With both helicopters competing for one set of bomb parts everything's bound to end in tears.



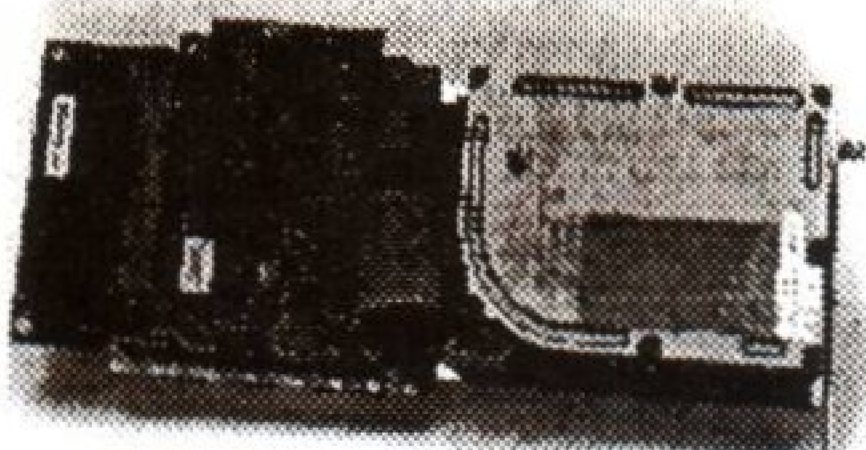
Player Two attempts to bomb the base – your base!

The small chopper sprites suit the split screen well but are tricky to control. The scenery is just desert and rocks, but all extremely solid, and is complemented by the mandatory 'phut, phut' sound effects occasionally interrupted by a wimpy cannon-fire effect.

As a solo game *Protector* replaces interest and excitement with frustration. The computer's an annoyingly predictable but irritatingly good pilot. As a two-player game it has its moments, but there just aren't enough of these to make for an enjoyable game.

It can't be considered a bad deal – everything works and there's a small element of strategy involved. This, however, can't disguise the lack of real gameplay and regardless of the price that has to be the bottom line for leisure software. *Trenton Webb*

GRAPHICS 6 / SOUND 2 / INTELLECT 5 / ADDICTION 4 / OVERALL 52%



DRIVE A HARD BARGAIN!

'SLOT MACHINE HARD CARD FOR 2000

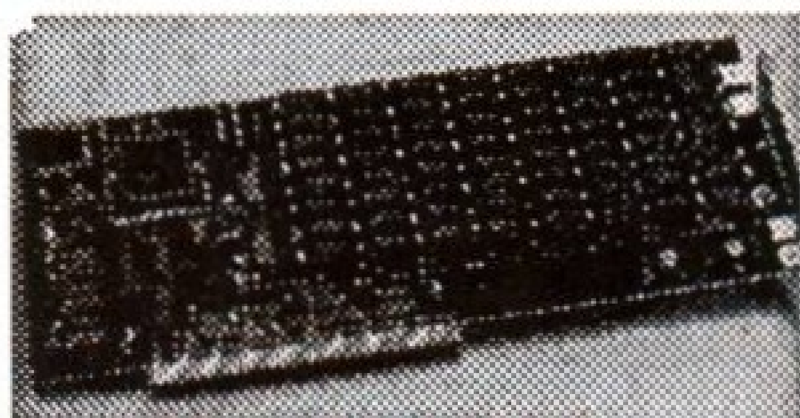
Ready formatted and auto-booting for the 2000. Can be a card, bay mounted or in seperate case-Your Choice. We fit the OMTI rapid caching controller for really **FAST** mass storage The 24 Millsec Toshiba drives we use are so quiet you cannot hear them run and a 44 meg system will cost you a **LOW £450** and 66 meg at **RIDICULOUS £550 A hundred pounds cheaper than elsewhere** *(COMMODORE'S OWN 40 MEG RETAILS AT £700.00!!)* **WORKS IN THE NEW B3000 ONLY FROM *SPIRIT-FIRST YET AGAIN***

HARD DRIVE KITS FOR A500 & A1000

You provide the ST506 drive and we sell you an A500/A1000/B2000 interface, controller, cables (extra long 36") and fan cooled power supply in a stylish drive case that holds a full height drive or two half height. (The system supports 2 drives) **The full kit costs £299 (RLL) or £289 (MFM) Or buy a complete A500/A1000 system 44 megs for £499**

STAND 80
16 BIT SHOW
London on the
28th, 29th, 30th
June & 1st July,

NEW!



OCTABYTE

For the B2000. From *SPIRIT* The very latest type of technology using a ram controller chip to avoid the wait state on the CPU (as with other boards). Continguous memory NOT fragmented. 8 meg board with graphics software support disk and utilities.

2 megs a LOW £275 8 megs £699

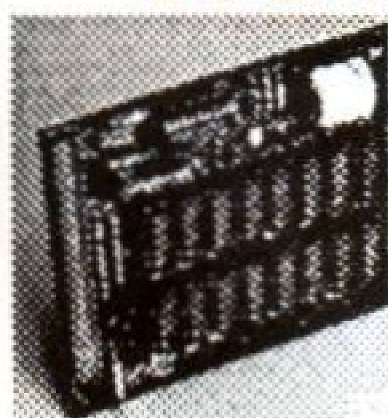
X RAM

As for the OCTABYTE but this one is for the A500 and A1000 and plugs into the expansion slot. The beauty of this one is that you can plug it into your 2000 when you upgrade so your investment is NOT wasted. In a very stylish low height chassis

2 megs a LOW £325

BOTH BOARDS WILL ALSO WORK IN THE NEW B3000

TRAPPER 501C



All our ram boards go with a utilities disk to turn ram on/off. No need now for silly switches. Also with the latest virus checkers **£39 no clock £45 + clock**

BYTES & PIECES ™





37 CECIL STREET, LYTHAM, LANCS, FY8 5NN
Tel 0253-734218 Fax 0253-736035

Callers by appointment please. Open 11am-6pm Mon-Friday ON-LINE support number available. **PRICES INCLUDE VAT**
We are the Official Northern European SPIRIT TECHNOLOGY; C.S.A.; LEADMAN ELEC distributors. Dealers welcome

MUSIC SALE

MUSIC X Full Version at a ridiculous **£89** rrp £224! or **£99** with a midi interface.

SOUND TRAP III the best sampler & AUDIOMASTER the best software at a silly £49.95 rrp £97

SONIX and MIDI £33 rrp £79

SOFTWARE SALE

SUPERBASE 2 £25 rrp £99
KINDWORDS 2 £25 rrp £54
MAXIPLAN 500 £25 rrp £99
(all 3 above for **£65.00 save loadsamoney)**
F29 RETALIATOR £15
IT CAME FROM THE DESERT £15

NEW! A WORLD FIRST

FROM

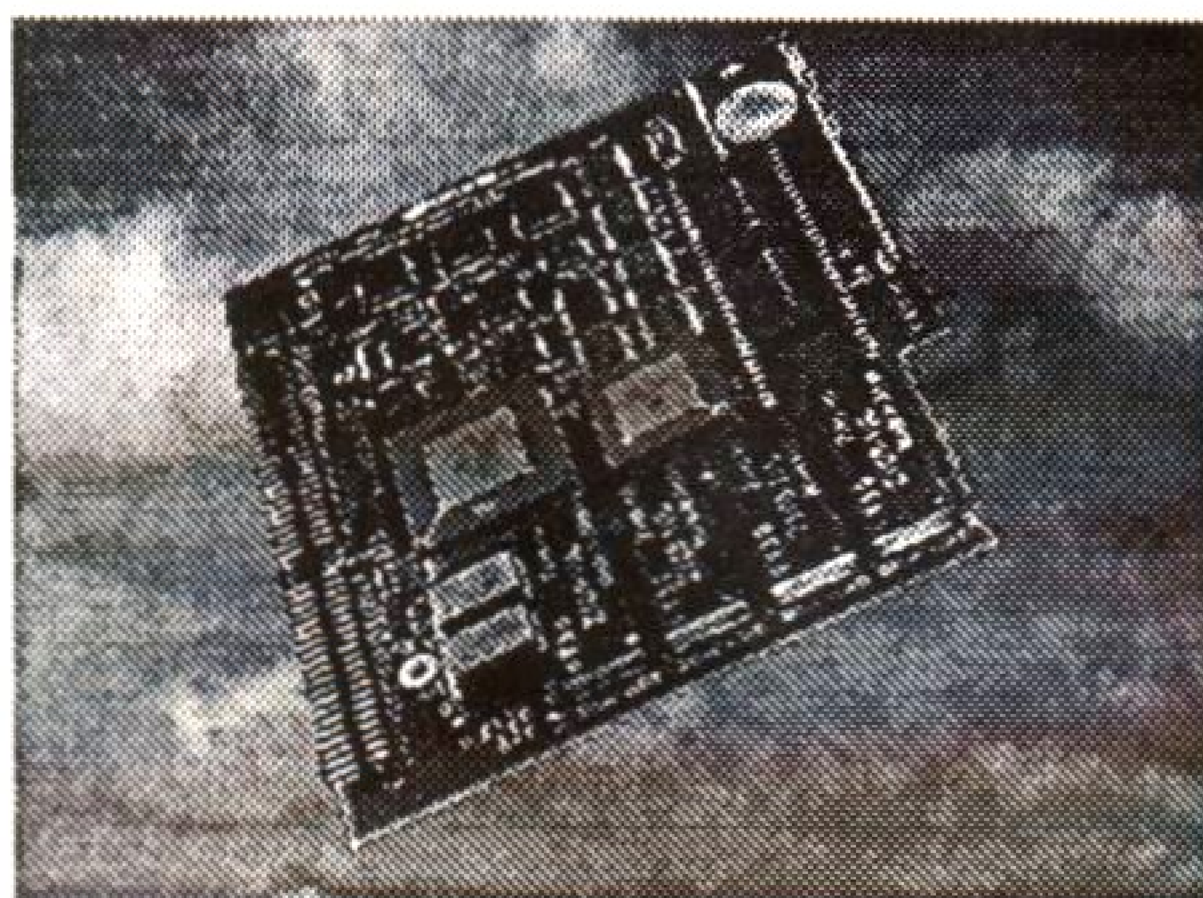
C.S.A.

THE SKY's THE LIMIT 68030 ACCELERATOR for A500 & B2000

A1000 VERSION AVAILABLE

Upgrade your A500 or B2000 to more power. Asynchronous design, surface mount technology provides blazing fast CPU performance at 25 and 33 MHz. Switches to 68000 mode when required. Optional math co-processor can run up to 50 MHz for racing through rendering, ray-tracing. 32BIT wide SRAM for putting Kickstart into RAM for blazing fast operations. Uses your existing 16 bit wide ram or use the optional 1-8 meg 32 bit ram board, double socketted for 4 meg Drams taking it up to 32 meg!! This board can give you up to 11 times performance gain over a standard Amiga. Wait state selectable RAM gives faster throughput. Rendering an animation in Scupt 4D that took 18 hours in 68000 mode took just 32 minutes in 68030 mode. Faster than Commodore's 68030 board. Unlimited upgrade capability-expand as your needs and wallet allows.. LOWEST priced 68030 accelerator for any Amiga The same board for the A500 fits in the B2000 so your upgrade path is secure. You can start with the bare board then add the co-processor, 32bit SRAM, then the 32 bit memory board, later put a 33 MHz 68030 in and upgrade the 68882 to 50 MHz. Technical support available.

EXCLUSIVELY FROM US



25 MHz board	£699
25 MHz 68882	£230
33 MHz board	£835
33 MHz 68882	£290
50 MHz 68882	£499
512K of 32 bit SRAM	£299

32bit ram board available July, 1990

Send for full specification, details& prices.

This advert was done with this 68030 board & Pagestream V2.0 in a fraction of the time it would have taken with a standard Amiga and output to a Postscript Laser.

SPECIAL INTRODUCTORY OFFER----SAVE £50

if you order your 68030 RACER before 1st July, 1990 GET B3000 POWER IN YOUR AMIGA!

B2000

B2000 COMPUTER Revision 6.2 with Fatter Agnus and UK warranty **£799 when you trade in your A500 for £300** and buy the computer and one other peripheral of your choice from us.

Computer only £899

BEEFY BOY

A500 owners need have no more power problems with our fan cooled 150watt 20 amp power supply. Attach as many peripherals as you want **£69**

IN1000 EXPANSION

A1000 memory board with clock, can autoconfigure as 512K, 1meg, 1.5 meg. Software ram test disk

1.5 megs £250

GENLOCK

SPIRIT's INTERLOCK GENLOCK is a professional quality design, and yet mid-priced to enable excellent, affordable technical video production or post-production. Send for full specification.

£399

Soon to come are some special effects hardware and software so look out for our adverts.

UNINTERRUPTABLE P.S.U.

What happens if you are working on the computer and the power goes? So does your data. Not any more. We now sell an uninterruptable power unit that will support four devises at 300 watts for 15 minutes after a power failure. **£199**

NEW! A WORLD FIRST

FAT TRAPPER

FAT TRAPPER IS A 4 MEG RAM BOARD THAT FITS IN THE TRAPDOOR SLOT UNDER THE A500!

Only the market leaders in this field, **SPIRIT** could bring you such a lovely piece of kit. Forget your 1.5's, your 1.8's and even the 2 meg boards just out. Make a quantum leap to new technology. Populate it as 512k. 1 meg, 1.5 meg 2 meg & 4 meg. Works with 512k chip ram and 1 meg chip ram-switchable. (Fatter Agnus) Dip switch contro lfor 5 position selection to Enable/disable the autoconfig- the addmem- Fat Agnus/Fatter Agnus- various start and end memory addresses. NO leads to the GARY chip thus eliminating potential damage to this expensive chip.This board can be configured to any situation or use with software support disk.

Zero K board £99

4 megs £399

INTRODUCTORY OFFER SAVE £50

on the 4 meg board if ordered before 1/7/90

PHONE ANYTIME FOR FAST FRIENDLY SERVICE

AMIGA A500 BATMAN PACK

512K RAM Computer - Built-in 1Mb Disk Drive. Workbench 1.3, Mouse, A520 TV Modulator. Speech Synthesis. Deluxe Paint II Art Package. New Zealand Story Game - Interceptor Flight Sim. & Batman the Movie Basic 1.3 Disk, Extras and Tutorial Disk. Introduction to the A500. All leads and manuals even a 13A plug!

£359.99

AMIGA A500 FLIGHT OF FANTASY PACK

512K RAM Computer - Built-in 1Mb Disk Drive, Workbench 1.3, Mouse, A520 TV Modulator, Speech Synthesis, Deluxe Paint II Art Package, F29 Retaliator, Rainbow Islands, Escape From The Planet of Robot Monsters, Basic 1.3 Disk, Extras and Tutorial Disk, Introduction to the A500. All leads and manuals even a 13A Plug!

£379.99

AMIGA STUDENT/BUSINESS PACK

Consists of A500 Computer, MidiMaster Interface, TV Modulator, Mouse, Mouse Mat, 10 Blank disks, Deluxe Paint II, Publishers Choice, Maxiplan 500, Superbase Personal, Dr. T's Midi Rec. Studio, Amiga Logo and BBC Emulator for use with BBC Micro Programs.

TOTAL RRP OF HARDWARE & SOFTWARE £1,002.00 .... £529.99

STUDENTS/BUSINESS SOFTWARE ETC. as detailed above .... ONLY £179.99

ACCESSORIES VALUE PACK

Microswitched Joystick, Tailored AntiStatic Dustcover, Mouse Mat, 10 Blank Disks, 40 Lockable Disk Box, Mouse Holder ....if purchased with Computer or with any order over £100 in value...£24.99

UPGRADE VALUE PACK

A.C.S. 1Mb 3.5" Single Disk drive - Slimline Enable/Disable Switch - Thru Port - Power ex Amiga £69.99
A.C.S. 512K RAM Expansion for A500 - Batt. Backed Clock and Memory Switch to Lock Out 512K on Board £59.99

SPECIAL PRICE FOR BOTH £119.99
NOTE: RAM Expansion can be fitted & tested free if ordered at same time as computer.

PRINTERS

- STAR LC10 .... £155.99
- STAR LC10 Colour £199.99
- STAR LC10/2 New Model £189.99
- STAR LC24/10 24 Pin £259.99
- PANASONIC KXP 1081 .... £159.99
- PANASONIC KXP 1124 24 Pin £289.99

All complete with FREE lead, ribbon, connecting cable and plug. All our printers are UK Specification, not converted grey imports.

RIBBONS ETC

- LC10 Black - Branded £3.50
- LC10 Coloured - Branded £8.90
- CASPELL Ribbon Refresh Ink in an Aerosol - Simple to Use £8.95
- THERMAL RIBBON - Prints your designs to paper then iron on T Shirt etc.
- LC10 Black £13.80
- LC10 Colour £19.55
- Getting the Most from your Printer by Babani - 84 pages £2.95
- Printer Cable AMIKA to Printer (Free with Printer) £5.99

SPECIALS

UPGRADES for 1.2 AMIGAS

- ROM version 1.3 Kickstart ROM with fitting instructions £29.99
- ENHANCER - Consists of Workbench 1.3 and Extras 1.3 .... £13.99

K.C.S. POWER PC EMULATOR
Fits easily into RAM Expansion Slot under AMIGA. Gives 1Mb RAM and excellent PC Emulation. Does not invalidate computer warranty £320.00

1Mb - 3.5" DISK DRIVES

- CUMANA CAX354 Disk Drive £89.99
- AMIGA A1010 Disk Drive £85.99
- A.C.S. Slimline, Switch and Thru Port (NEC or TEAC Drives) £69.99

HARD DISK DRIVES

- AMIGA A590 20Mb Plug In Drive £359.99
- Upgrade Chips Per Megabyte £79.00

RAM EXPANSIONS

- A.C.S. 512K RAM EXPANSION - Batt. Backed Clock and Switch £59.99
- AMIGA A501 - 512K RAM Expansion and Clock - Made by Commodore £89.99

MIDI EQUIPMENT

- DATEL Midi Master Interface £29.99
- Midi Leads Per Pair £5.98

MONITORS

- COMMODORE 1034S 14" Stereo Col .... P.O.A.
- PHILIPS CM8833 14" Stereo Col .... P.O.A.

JOYSTICKS

- KONIX Speedking £12.95
- KONIX Navigator £11.95
- CHEETAH 125+ £8.99
- ZIPSTICK Super Pro £13.95
- CHEETAH Mach 1 .... £10.99
- QUICKJOY 125 Superboard £18.99
- QUICKJOY 126 Jet Fighter £13.99
- QUICKJOY Infrared £36.99

ACCESSORIES

- AMIGA Keyboard Dust Cover £4.99
- AMIGA Monitor Dust cover £4.99
- STAR Printer Dust Cover £4.99
- 14" Mon. Anti Glare Screen Cover £19.99
- Monitor Tilt & Swivel Stand £19.99
- Mouse Mat £4.99
- Mouse Bracket (to hold mouse) £2.99
- 3.5" Disk Drive Head Clean. Kits £5.99
- Copyholders..A4 Document Holder £15.99
- PREMIER CONTROL CENTRE - sits over Amiga as monitor stand & second disk drive holder £45.95
- PACE Linnet Modem £139.99
- PACE Linnet 1200 Modem £219.99
- CONTRIVER 2 Button Mouse £26.49
- AMIGA 1352 Mouse £32.49
- MARCONI RB2 PC9 Trackball £51.99
- VIDI-AMIGA Mono Digitiser £99.95
- Colour upgrade for VIDI-AMIGA £19.95
- RENDALE Genlock 8802 .... £179.99
- 40 Disk Holder Lockable Top Quality £5.99
- 80 Disk Holder Lockable Top Quality £10.99

DISKS - DISKS - DISKS - DISKS - DISKS
FULLY GUARANTEED BULK DISKS 3.5" ALL INDIVIDUALLY WRAPPED & WITH LABELS.

- Pack of 10 .... £6.99
- Pack of 10 in Plastic Case £7.99
- Pack of 20 .... £12.99
- Pack of 50 .... £29.99
- Pack of 20 in our top quality lockable 40 Disk Holder £18.59

Spare labels, assorted colours 60 for £1.00

EDUCATIONAL & CHILDRENS

- Fun School 2 - Under 6 .... £13.49
- Fun School 2 - 6-8 years £13.49
- Fun School 2 - 8 and over £13.49
- Micro English (GCSE) £19.99
- Micro Maths (GCSE) £19.99
- Things to do with Numbers £15.99
- Things to do with Words £15.99
- Chicken Little £24.99
- Three Little Pigs £24.99
- The Three Bears £24.99
- Noah's Ark £24.99
- AB Zoo £3.99

SERIOUS SOFTWARE

- Kind Words V2.0 .... £34.99
- Scribble Platinum £35.99
- Pen Pal £94.99
- Advantage £72.99
- K-Data £34.99
- Superbase Personal £35.99
- Superbase Personal 2 .... £54.99
- Superbase Professional £164.99
- K-Spread 2 .... £37.99
- Digicalc £26.49
- The Works - Platinum Edition £109.99
- VIP Professional £69.99
- Home Accounts £20.49
- Cashbook for the Small Business £35.99
- Digita System 3 .... £34.99
- Personal Accounts Plus £21.95
- Small Business Accounts £59.99
- Small Business Accounts Extra £84.99
- Personal Tax Planner £26.49
- Page Setter v2 .... £74.99
- Publishers Choice £68.99
- Starter Kit £49.99
- Home Office Kit £99.99
- Assem. Pro £54.99
- BBC Emulator £39.99
- Transformer - PC Emulator £24.75
- HiSoft Basic £57.99
- HiSoft Basic Extend £14.95
- Lattice C V5.0 .... £169.99
- AMOS the Game Creator £37.99
- Trip-A-Tron £22.99
- DeLuxe Paint III £55.99
- DeLuxe Print II £34.99
- DeLuxe Video III £59.99
- Movie Setter £49.99
- Comic Setter £34.99
- Photon Paint 2.0 .... £35.99
- Aegis Audiomaster II £49.99
- Instant Music £17.99
- DeLuxe Music Construction Set £47.99
- Dr T's Midi Recording Studio £39.99
- Music X £165.99
- Disk 2 Disk £25.99
- DOS 2 DOS £26.99

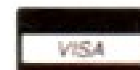
LEISURE SOFTWARE

- 688 Attack Sub £16.49
- Black Tiger £16.49
- Bloodwych £16.49
- Bloodwych Data Disk £10.99
- Bomber £19.99
- Cabal £16.49
- Castle Master £16.49
- Conqueror £16.49
- Cyberball £12.99
- Cycles 16.49
- Daily Double Horse Racing £12.99
- Damocles £16.49
- Dan Dare 3 .... £13.99
- Deluxe Scrabble £12.99
- Escape F.T. Planet / Robot Monsters £12.99
- F29 Retaliator £16.49
- Flimbo's Quest £16.49
- Football Manager 2 .... £12.99
- Full Metal Planet £16.49
- Gin and Cribbage £19.99
- Gravity £16.49
- Hammerfist £16.49
- Hard Drivin' £12.99
- Hot Rod £16.49
- Impossamole £13.99
- Infestation £16.49
- It Came From The Desert (1 Meg) £19.99
- Italy 1990 .... £16.49
- Ivanhoe £16.49
- Kick Off £12.99
- Kick Off Extra Time £6.99
- Kick Off 2 .... £13.99
- Kid Gloves £16.49
- Knights of the Crystallion £19.99
- Magnum 4 .... £19.99
- Manchester United £16.49
- Midwinter £19.99
- New Zealand Story £16.49
- Oil Imperium £16.49
- Pipe Mania £16.49
- Pirates £16.49
- Populous £16.49
- Populous New Worlds £6.99
- Puffy's Saga £16.49
- Rainbow Islands £16.49
- Sherman M4 .... £16.49
- Sonic Boom £16.49
- Space Ace £27.99
- Space Rogue £19.99
- TV Sports Basketball £19.99
- TV Sports Football £19.99
- Tennis Cup £16.49
- Their Finest Hour £19.99
- Theme Park Mystery £16.49
- Tower of Babel £16.49
- Ultimate Military Simulator £16.49
- Warhead £16.49
- World Boxing Manager £12.99
- X-Out £12.99
- Xenomorph £16.49

PLEASE ASK FOR DETAILS OF ANY GAME NOT LISTED.

All prices INCLUDE VAT and DELIVERY - All items despatched within 24 hours of cleared payment subject to availability. Ring for details of Next Day Delivery Service. Ring or write for prices and details of any item not listed.

AUDITION COMPACT SERVICES,
Shop at: 9A St. Peters Street, Stamford, Lincs, PE9 2PQ.
Come and browse or send cheques payable to A.C.S.
Telephone 0780 55888 Shop Hours - 0780 720531 Out of Hours.



SORRY! THE WORLD IS OUR LIMIT!

TOP QUALITY 3.5" DS/DD DISCS AT EXPORT PRICES

ALL OUR DISCS ARE GUARANTEED

NUMBER OF DISCS ORDERED	PRICES PER DISC IN BOXES OF 10 WITH LABELS					
	GERMANY DM	U.K. P	U.S.A. $	ITALY LIRE	SWEDEN KRONE	SPAIN PESETA
10-90	1.14	41p	0.67	840	4.15	73
100-490	1.09	40p	0.64	805	3.95	70
500+	1.05	39p	0.62	780	3.80	68
	IN BOXES OF 50 WITHOUT LABELS					
50-450	1.05	39p	0.62	780	3.80	68
500+	1.00	37p	0.59	740	3.60	64
POSTAGE (per order)	10.00	3.60	6.00	7400	36.00	640

Outside Europe please add 20% to cover shipping costs.
Payments accepted in other currencies at current exchange rate against DM.
Please note: These prices do not include any local taxes (eg V.A.T.)
Prices subject to variation following changes in exchange rates etc.

To: **GTI International Amiga Service, Zimmersmuhlenweg 73, 6370 Oberursel, West Germany.**
Telephone (49) 6171 73048 Fax (49) 6171 8302

Please send me ______ 3.5" DS/DD Discs in boxes of 10/50.

NAME ....

ADDRESS ....
....
....
....



Method of payment :

____ Eurocheque enclosed.
____ Cash enclosed *(please use registered mail!).*
____ Access/Visa/Eurocard/Mastercard/Amex/Diners
(Credit Card Number __________ Expiry ______)
____ Cash-On-Delivery *(Only available in Austria, Belgium, Denmark, Finland, France Germany, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland & U.K.).*

World Cup
FOOTBALL CRAZY
'90

WITH Snout'n'Greavsie

The extra-special Snout'n'Greavsie round-up of footy games past and present. Back to you in the studio, **PHIL SOUTH...**

Good evening, and what a packed evening's soccer we've got for you tonight, haven't we Greavsie? "Wuh? Oh yus, we certainly have, Phil Boy. Pass the ginger beer, will you?"

There you go, Greavsie. Anyway, as I was saying, in a packed show tonight we'll be looking at all the very best in Amiga soccer action, and some of the lighter moments too, won't we Greavsie? "Yep. You can bet your right boll..." Ha ha ha, always the joker, Greavsie. Ha ha.

Anyway, without much further ado it's over to John Motson with a peg on his nose for the quick nonsensical round-up of what we can look forward to in tonight's game. Hello John! How's the weather doing down there in Southampton?

It's A Game Of Two Halves

"Errr, I duddo, Phil. I'm in Birbinghamb, but what a brilliand day for some first class foodball." Do you mind if we interview each other for a bit to cover for the fact we haven't any celebrity guests? "Nod ad all Phil, in fact all by words are in the scripd, so fire away." Ha ha ha. Okay John, take the stupid peg off your nose and tell us who are the front runners in tonight's exciting competition?

POP!

"Phew, that's better..."



(Cue the outrageous house music almost smothering John's manic voice-over, while the game graphics twirl, fold and wibble to the music)

Yes viewers, it's a close-run thing, with the favourites being:

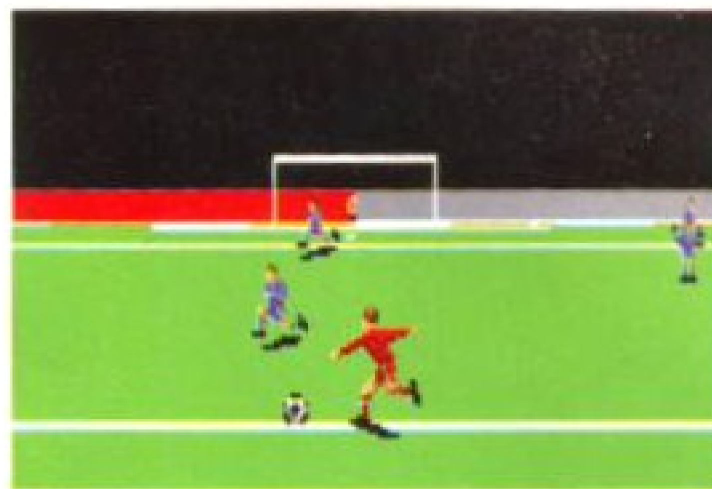
THE LINE UP



WORLD CUP SOCCER – ITALIA 90

(Virgin Games)

This is the only official one in the pack today, Phil, and looks to be one of the better games this season.



INTERNATIONAL SOCCER CHALLENGE

(MicroStyle)

Although they aren't launching a World Cup game as such, MicroStyle are staying with the pack doing a follow-up to their famous *MicroProse Soccer*, truly a game and a half. Sorry, two halves.



ITALY 1990

(US Gold)

An unrepentantly unofficial game (of an undisclosed number of halves) here, from US Gold. Including a free guide to the World Cup.

THE PLAY-OFF

Thank you John, er, Motson for that concise and really very exciting report, eh Greavsie? Greavsie? Er, what's that you're reading? "Did you know, Snout, that Sir Matt Busby had such exquisite diction that he was down on his pass-port as a professional fruit boiler?"

Nnnnnno, I didn't know that, but what do you think of the report?

"Oh yes, that. I wasn't listening, but I tell you what, Snout. I don't arf like this World Cup File Of Facts you get free with Italy 1990, listen to this: Only 13 nations entered the first World Cup in 1930, and seven of those were South American Teams. Fascinating stuff." Er, so anyway, Greavsie, it's a interesting international field out there tonight, with some really good tips for the top. All the game feature a full tournament, and things like free kicks, penalties, corners etc. so we won't bother with those. What we want to know is are they any cop? Let's look in detail at the games and their chances...

(cue the silly house music again)

"So from me, John Motson, wearing a tasteless sheepskin jacket in an empty stadium in Birmingham (and minus the peg on my nose), it's back to Snout'N'Greavsie in the studio."

BIBLIOGRAPHY

***My Soccer Life* by Sir Bobby Charlton**
***It's A Funny Old Game* (Greavsie's Autobiography Part 3) by Jimmy Greaves**

WORLD CUP SOCCER – ITALIA 90

A very strong contender for the top, this one. Virgin's Andrew Wright is quoted as saying "It's the only official World Cup game, it's dead good and all the others are crap!" Although that's a matter of opinion, I'm sure. Featuring two versions on the Amiga; one for 512K and one for 1 Megabyte. The megabyte versions have extra features like digitised sound and "super sexy speech effects". The game is viewed from above, and play is similar to *Kick Off*, as the game is seen from above and scrolls vertically from goal to goal. The general quality of the game is good, and although the controls are a bit stiff, the game done good.

INTERNATIONAL SOCCER CHALLENGE

(MicroStyle)

MicroStyle, in their former MicroProse incarnation, produced a creditable

GREAT SOCCER GAME SUCCESSES

There have, in the Chequered History of Soccer Computing, been some corkingly good games. Unfortunately so few of them have been about football. But myself and Greavsie got together before the match to bring you this roundup of the very best in soccer gaming. Greavsie?

1. MATCHDAY AND MATCHDAY 2

(Ocean)

"Ta. Until the now-famous *Kick Off* came along there was nothing to touch this baby for playability, eh Snout?" No indeed. "And it in fact stayed in the charts for some 56 weeks after being released, what about that?" Phenomenal, Greavsie. Superb. Over the moon.

2. FOOTBALL DIRECTOR 1 and 2

(D&H)

Like Ronnie Rosenthal has done for the Anfield squad, this game brought a fresh footballing brain to the game. "Yes, and they kicked the ball with their feet some-



times, too." No, Greavsie, these were foot-ball managment games, and the best ever made. They topped the charts for centuries, despite being written in Basic! It just goes to show that even if you sow the seeds, you can't always expect to reap the whirlwind. "Yus, that's exactly it."

3. MANCHESTER UNITED

(Krisalis)

A recent player in the league, this one, but finding a firm following in the strategy gamers, Jim? "Quite right. As my old mate Stuart Hall once said, 'If a week is long time in politics, then for Ron Atkinson's Man United the last seven days have been an equinox.' I think that says it all." So do I, Jim, so do I.

4. TRACKSUIT MANAGER

(Goliath Games)

At the time they said that a Tracksuit Manager was a real Player Manager, some-one who knows the nuts and bolts of playing the game, and yet can throw a spanner in the works when it comes to managing the club. "A stretched metaphor and a bit of a backhanded compliment there, Snout, but wise words nevertheless." This game bene-fits from hindsight, as do we all.

5. KICK OFF

(Anco)

Everyone's favourite football game this one, and something of a fluke success for Fourth Division Anco, I think. What about that then, Greavsie? "Yeah, I think Souness gave Fleck a second chance, there, and he grabbed it with both feet." Very sound advice.

FOOTBALL MANAGER: WORLD CUP EDITION 1990

(Addictive)

This best-selling game returns in this special World Cup edition. Written by Kevin Toms, the self-styled "man who bought Billy Connolly's beard".

KICK OFF 2

(Anco)

The world's most famous footy game on the Amiga gets another outing with improved playability (if that's possible) and a lot more besides.



WORLD CUP 90 COMPILATION

(Entertainment International)

And a completely brilliant compilation here for the tight of pocket, with the original *Kick Off* (Anco), *Tracksuit Manager* (Goliath Games), *International Soccer* (Microdeal).

footy sim with *MicroProse Soccer*. Now they swapped their footy skills for programming skill, with this epic 3D programming exersize. Filled polygons are the order of the day, as you look at the field from any angle to see players running around looking like glorious three-dimensional filled polygons. It's a sort of *Stunt Car Racer* with footballs, really. Lots to recommend it, especially playability, thanks to MicroProse's usual rigorous playtesting no doubt. A classy game, but lacking the real instant appeal of *Kick Off 2* and *Italy 90*.

ITALY 1990

(US Gold)

Nicely designed and playable game from US Gold. Follows the tradition of *Kick Off*, with lots of added features like team and player selection.

You have the control to specify any players in any role, so you can even have Peter Shilton playing striker if you really wanted to. Good sound and fast action make this a touch better than most, and although not as slickly presented as the Virgin team, plays a touch better. Lots of nice tunes and graphics.

FOOTBALL MANAGER: WORLD CUP EDITION 1990

(Addictive)

Old timers Addictive go for a comeback with a special edition of their famous 1982 vintage footy manager game. It extends the game format used in *Footy Managers* 1 and 2 into a full World Cup scenario. Not only do you get a corking footy manager game, but also a free World Cup Wall Chart and entry to a great World Cup Competition!

Nice effort there, Addicitive, but *FM* drops a couple of points in the league here, mostly due to the silly picture of Kevin Toms which appears a few times on the box, on the adverts, and even on the flippin' Wall Chart. As if to add insult to injury, one of the top prizes in the competition is to have your picture taken with Kevin for the packaging of *Footy Manager 3*! Knockout.

KICK OFF 2

(Anco)

Anco are looking for a hat-trick with the updated version of their top-scoring footy game. This is the standard by which other footy games will be judged. The original game was so fast and playable that it was awarded the UK Game Of The Year Award. *KO2* looks to be just as good.

It features a full-sized multi-directional scrolling pitch, which is the proper size in proportion to the players. Others features include player attributes, aftertouch controls to curve the ball, and a selection of set-piece free kicks. The best feature is the ability to store 10 goals as action replays to give a selection of Golden Goals to choose from! And the graphics are so good, the grass is even worn away in the goalmouth, just like on a real pitch. Outstanding.

WORLD CUP 90 COMPILATION

(Entertainment International)

A positive treeful of old chestnuts just waiting to be played. Star feature here is the original *Kick Off* from Anco, which in case you missed it must be the best and most playable footy game of all time.

Next you have Goliath's *Tracksuit Manager*, which is not a textile factory simulator, but a footy manager game with an interesting title. Nice if you like manager games but crap if you don't.

And finally in this Village Idiots' Dozen, you have *International Soccer* from Microdeal. Not so good this one, especially in the light of having *Kick Off* in the same bundle, but bundlers can't be choosers.

"Did you know I actually had a record deal to do the theme for the World Cup if they did it in England again. I called it 'I Wish It Would Pee Down On Phil Collins'. S'funny, but they never got back to me..."

Ha ha ha, you're a one, Greavsie. Ha ha ha.

World Cup Predictions

Right then, it's time for some predictions from the *Amiga Format* team, but before we get into that, who do you fancy, Greavsie? "Well there's that young lady in the producer's office, with the tight black skirt and the big baz..." Ha ha ha. No, Greavsie, the World Cup, me old son. Ha ha ha.

"Oh right, yes. Sorry Snout. I reckon old Italy will get it, bein' the home team, like, but a little bird told me that West Germany stand more chance, on account of having the DDR on their side as well. 22 against 11, that's my kind of odds, Snout." Ha ha ha. Very good, Greavsie. Little bit of politics there.

"I think basically I agree with Terry Venables when he said that 'If history is going to repeat itself I should think we can expect the same thing again.' How about you Snout?" I quite fancy the girl in the skirt...

Bob: I fancy Scotland to beat Brazil 2-1, with goals from Johnstone (32) and McCoist (57). Gascoigne will be on the subs bench for England against Holland and will come on after 72 minutes.

Maff: I think United Arab Emirates will spark off a major conflict in the Middle East when they cripple Maradona causing war between the two nations...

Paul: The Republic of Ireland, needing a last-minute goal against Holland to qualify, bring on player-manager Jackie Charlton who scores dramatically – but RI are disqualified when Charlton is found to be English...

Marcus: I fancy Pirmin Zurbriggen for the downhill...

Jennie: Gary Linneker injures his hind leg dramatically when jumping on John Barnes for a good snog after Barnes scores the winning goal for England against Holland.

Andy Smith: "Mine's a large one!"

Ange: I can predict that I won't be watching it...

James: Flushed with the heady wine of new-found freedom, all the Eastern Bloc countries qualify for the final and, in an orgy of democracy, agree to come joint first...

Damien: Swedish forward Mats "I've started, so I'll finish" Magnusson is disappointed when his equaliser against Scotland fails to bring victory – Sweden have passed more times than the opposition.

Thank you team. So that's all from us in the studio. We'll be back next week with more soccer highlights and few words from myself and of course Greavsie. Have you enjoyed tonight's game, Jim? "Can't grumble, Snout. But I still fancy the girl with the big..."

GREAT SOCCER GAME DISASTERS

So, there's been some rather good games, what really trashy ones have there been in Soccer Computing's Chamber Of Horrors?

1. PETE SHILTONS HANDBALL MARADONA
(Grandslam)

This really was a terrible game, Greavsie, wasn't it? And such a stupid name too! "As my old chum Kev Keegan once said, 'I don't think there's anyone bigger or smaller than Maradona.' I think we can all learn from that."

I asked Peter Shilton how he rated England's chances, and he said 'You've got to believe that you're going to win, and I believe that we'll win the World Cup until the final whistle blows and we're knocked out.'

2. LEAGUE CHALLENGE
(Atlantis)

Who remembers this old turkey? Greavsie? "Yes. I'd put my foot down with a firm hand on that one." Still at £3 or so, what can you expect? "Fifty pence change?" Exactly.

3. ROY OF THE ROVERS
(Gremlin)

Not so much a game of two halves, more like a game of two minutes, what do you reckon, Jim? "Well, personally I thought there was too much walking around and not much actual football.

4. WORLD CUP CARNIVAL
(US Gold)

From back in 1986, this absolute load of piffle was actually a revamped older game, which was just as bad the first time around.

5. FA CUP FOOTBALL
(Virgin)

I don't even remember this one, Greavsie, do you? "Yes." Well, I really think they gambled their eggs on that one.

6. GARY LINEKERS HOT SHOTS
(Gremlin)

A Gary Lineker game from Gremlin. One of many, I seem to recall, Greavsie? "Oh yus, Snouty, there was..."

7. GARY LINEKER'S SUPERSTAR SOCCER
(Gremlin)

"...which was advertised as 'every bit as exciting as Gary Lineker'. Which I think says it all, in a nutshell, to coin a phrase. "And..."

8. GARY LINEKERS SUPER SKILLS
(Gremlin)

"...which wasn't even a flippin' football game!" No indeed, in fact this was more of a sort of Daley Thompson's work out in the gym game.

9.FOOTBALLER OF THE YEAR
(Gremlin)

Although this one wasn't too bad, it was a trifle superficial and lacking in design, wasn't it Greavsie? "Yes." (silence) That's it Greavsie, fill up the expensive air time with good conversation and witty insights into the game, won't you?

10. SUPER SOCCER
(Ocean)

Although they produced the BEST soccer games with the *Match Day* duo, in 1987 Ocean came out with this real stinker. "They certainly did. Bobby Charlton drove all the way to Peterborough just to spit on this game, and you know what a nice man he is, Snout?" Yeah, what a lovely bloke old Sir Bob is. "Yers, he shows you can still cry and be a man."

THE ONES THAT GOT AWAY

Hmm, okay. What about the obvious hordes of football games that never quite made it? How about these exclusive secret plans we've had leaked to us from a top UK software house:

GEORGE BEST'S DRINKING SOCCER

(A game of about 16 halves and four or five shorts, followed by a couple of birds in mini skirts and a night in the cells.)

JACKIE CHARLTON'S IRISH fiSHING SOCCER

(A possible follow-up to *Ossie Ardiles' Unexpected Falkland Islands Holiday Soccer*)

PAUL MCSTAY'S MIDfiELD GENERALS

(Football role-playing game set in the 21st Century, starring Scotland's hard-working little dynamo in the title role, with Peter Beardsley as wise old Obi Wan)

BOBBY CHARLTONS HAIRCUT CHALLENGE

("Can YOU keep it in place?")

JIMMY HILL'S CHIN UP CHALLENGE

(Out-chin the famous commentator, with that exclusive 'beard on/off' mode)

PETER SHILTON AND DEIGO MARADONNA SING GEORGE GERSHWIN

(Plus a couple of stonking Donny and Marie Osmond numbers)

PETER BEARDSLEY'S RESERVE BENCH HERO

(90 minutes of superb armchair football)


Battle Master
TM

A TIME of MISERY, A TIME of BLOOD

'A hero is coming from the south who will conquer the four kings of this sorely troubled land. And amidst the bloodshed and magic, the clash of shield and the glint of steel, the seeds of peace will be sown. When the battle is over a new age begins.'

FOR AS LONG AS ANYONE CAN REMEMBER, ORC, ELF, MAN AND DWARF HAVE BEEN LOCKED IN TERRIBLE COMBAT; THE LAND IS A DESOLATE WILDERNESS REEKING OF DEATH AND DECAY. BUT THE WATCHER HAS PROPHESIED THAT THE AGE OF CONFLICT WILL END WHEN THE CROWNS OF THE FOUR FEUDING KINGS ARE WON AND BROUGHT TO THE TOWER.

BATTLEMASTER TAKES THE FANTASY ARCADE ADVENTURE INTO A TOTALLY NEW DIMENSION. SURVIVE HAIR-RAISING ENCOUNTERS WITH FEROCIOUS MONSTERS, NEGOTIATE TO BUILD UP YOUR OWN PERSONAL ARMY AND BECOME A MASTER OF THE MAGIC ARTIFACT. FEATURING HIGHLY DETAILED MAPS, PACKED WITH PUZZLES, DRAGON AND POTIONS, AND INCORPORATING UNIQUE FIGHTING STRATEGIES, BATTLEMASTER OFFERS THE UI TIMATE CHALLENGE.

War creates many heroes, but there is only one BATTLEMASTER.



DESIGNED BY MIKE SIMPSON. GAME CONCEPT OF THE YEAR AWARD WINNER.

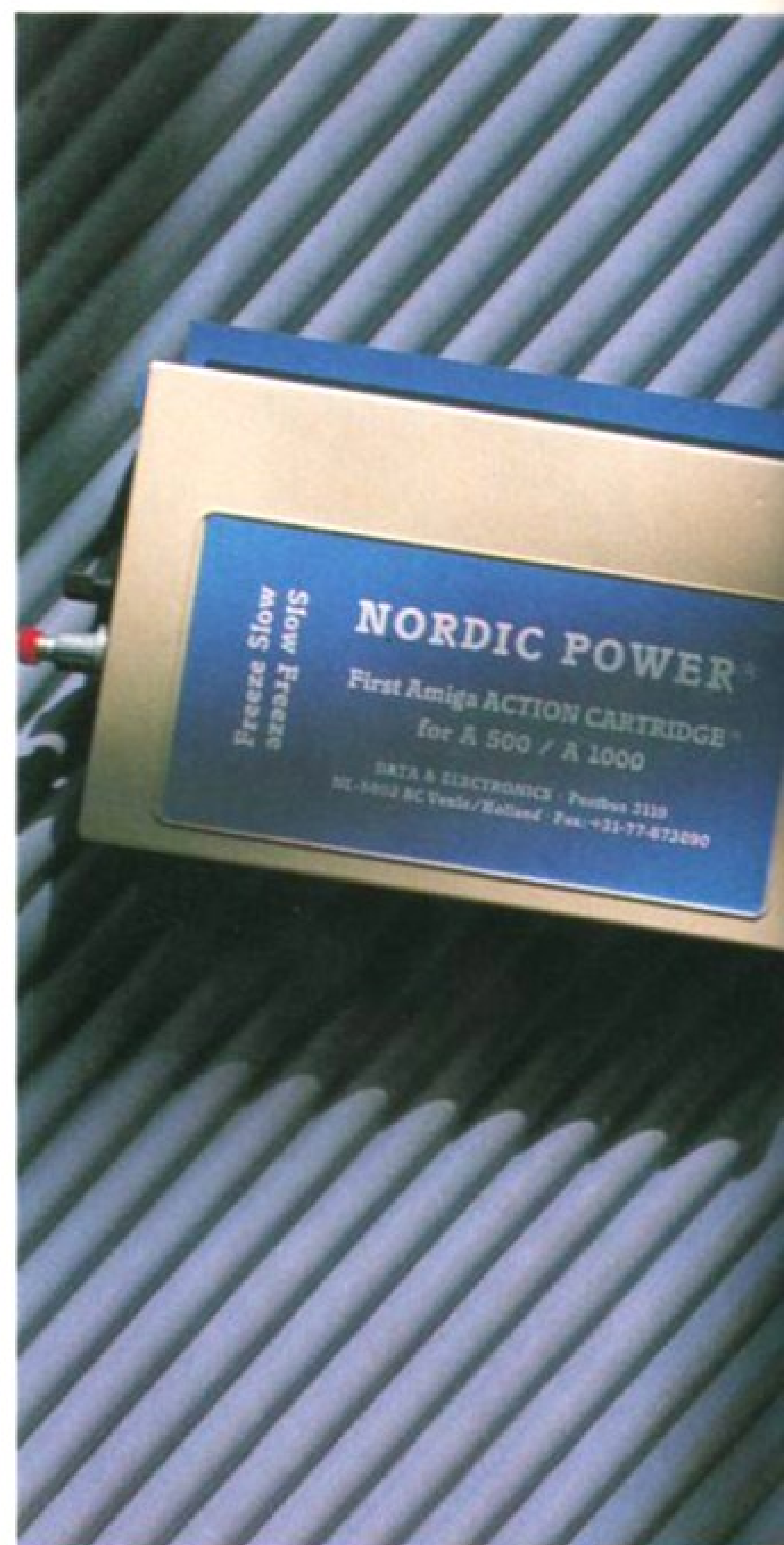
AVAILABLE SOON ON AMIGA, ATARI ST (£24.99), IBM PC & COMPATIBLES (£29.99).

SCREENSHOTS: ATARI ST VERSION. ILLUSTRATION AND LETTERING: CHRIS ACHILLEOS



PSS, ... HOUSE, 118 SOUTHWARK STREET, LONDON SE1 0SW. TEL ... 1454

FULL Plastic JACKETS



Where there are games, there will be game cracking. **MAFF EVANS** probes inside the Amiga with two new cartridge systems that are just about to hit the street.

When the eight-bit machines were at their height, cracking cartridges were an essential piece of kit for almost every computer user in the land. Riding shotgun with controversy due to their capabilities at copying commercial software, the devices allowed digital whizz kids to hack into games and mess around with the coding directly – cheating the games and puling out music and graphics .

Now we have the advanced power of the Amiga, a screen grabbin' sound stealin' code monitorin' lip smackin' cartridge is bound to cause a storm. Two companies have decided to capitalise on this by releasing what they call an action cartridge. Both cartridges do much the same tasks, so it seems a sensible idea to take a look how both cartridges perform at various tasks.

NORDIC POWER ACTION CARTRIDGE

The Nordic Power device is a rectangular brick-like affair that plugs into the side expansion port of the A500. Mounted on the rear of the cartridge is a 'freeze' button and a Slow Motion knob. The freeze button is the widget that stops the program in its tracks and switches into the cartridge's operating mode, while the Slow Motion Button... er... well, slows the program down, really.

The operating system is in the form of a series of menus, which allow access into the works of the grabbed program. All options are caried out using the cursor keys, so there is no need for the user to learn a new operating language.

DATEL AMIGA ACTION REPLAY

The Datel system is a sleek, flat device, with a freezer button and Slow Motion knob, which (unlike its competitor) can be completely switched out so as not to interfere with the program in memory.

The operating system is via simple one or two-letter typed-in commands. Before you run off screaming "Oh no! Not typing!" all the commands are are quick and easy to use and a press of the Help key prints up a list for you to peruse. Datel have developed FDOS – a new disk format to allow twice as many files to be saved on a disk than in the usual AmigaDos format. The package comes supplied with a utility disk to convert FDOS files to IFF or AmigaDOS, ready for you to load into other environments.

THE FREEZER

A 'Freezer' stops a program and slings the entire contents of memory out to a disk, ready for you to load in at a later time.

The Datel Cartridge is extremely simple to use in this department. Just load up the program, hit the freeze button and enter the Save All command to save the file out to disk.

The Nordic cartridge is a mite more fiddly. After powering up the machine the freeze button has to be pressed to initialise the system and instead of a straightforward save memory option, the freezer offers you a whole range of methods of saving the file. Care has to be taken to ensure that the right method is chosen corresponding to the memory configuration of your machine and the memory usage of the program itself.



You can change game graphics with the grabber, such as undressing *Hammerfist* (ABOVE) or giving *Theme Park Mystery* a cool image (BELOW).



ACTION REPLAY 8/10 – Effective in most cases and easy to use.

NORDIC POWER 6/10 – Fairly effective, but generally takes a lot of experimenting before good results are finally obtained.

SCREEN GRABBING

One of the most useful sections in a freezer cartridge is the ability to display and save out screens from games and other programs. 'Grabbed' screens can then be loaded up into art programs or DTP packages, eliminating the need to mess around with cameras and dropcloths



to get a picture of Amiga graphics. Nordic Power has a whole host of options available to the user, such as shifting individual bitplanes, jumping to different RAM banks and altering the DOF Start and Stop registers. Despite this wealth of tools, the Datel cartridge manages to succesfully capture considerably more pictures than Nordic Power.

The only problem with the Datel grabber is that after you've frozen and saved all the screens you want, they each have to be converted into IFF format using the utility disk before they can be imported into any other program – a point which near enough balances the difference between the two systems.

ACTION REPLAY 7/10 – Powerful and straightforward, but some more tools would be useful.

NORDIC POWER 7/10 – Not quite as reliable, but the wealth of image tools means that chances are a reasonable image will emerge.

SOUND TRAPPING

It can be a pain trying to put sound effects into a program, so a sound trapper could be especially useful, since you can 'steal' sounds.

Nordic Power's sound section consists of a waveform player which puts the entire contents of memory out through the speakers. Unsurprisingly, this creates a hell of a row most of the time, but in the middle of the noise, the sound effects emerge. By moving the start and end pointers and altering the playback frequency, a single effect can be trapped and saved out in IFF format.

The Datel cartridge uses a totally different system. By freezing the program just after the required effect is played, the cartridge can play back the last sound heard on each channel. Once the correct sound is heard, it can be whammed out onto FDOS disk ready for conversion into IFF format.

ACTION REPLAY 7/10 – The cart automatically finds sounds, but you must be quick on the button to get the right one.

NORDIC POWER 8/10 – Even though it doesn't find the sounds for you, in the long run it's much easier to grab sounds using the Nordic Power system.

THE MONITOR

This is the section that will have most hacking, cracking and packing fiends fair vibrating with delight. The Monitor allows the user to break into the actual program code and change things at their whim. Extra lives, level skipping and various other cheats can be found via this method.

Although the Nordic cartridge has a wide range of options available via simple single letter commands, the Action Replay cartridge manages to provide quite a few more tools with which to tinker inside the programs. Nordic Power's capabilities are based around normal monitoring and assembling functions, with a few extra devices such as memory printing and ASCII dumping, but even this pales next to the Datel cartridge's power.

Action Replay allows you to scan the code using a 'Trainer', which finds values that have been changed by a specified amount. This is useful for finding the register that holds the lives counter in a game, so all you have to do is stick a new number in...

BELOW: This screen showing the Mekon caught in a reflective moment shows what can be done with the screen grabbing facilities offered by an action cartridge.



ACTION REPLAY 9/10 – Speedy, powerful and fair bursting with commands, definitely comes out top.

NORDIC POWER 7/10 – Contains all you'd expect from a decent monitor, but not much more.

IN CONCLUSION...

Now we know what both these devices do, which one should separate you from your hard-earned cash?

Nordic Power prides itself on being the first Amiga action cartridge, but has a few annoying quirks that could cause brainache to dedicated crackers. To begin with, the writer of the manual obviously didn't have a full grasp of English, with some remarkable statements such as "The Amiga musics exists from samples (samples means monsters)".

Once you're past this hurdle, the fact that the cartridge needs to be initialised on power-up is most irksome. A lot of patience is needed when using other parts of the system, such as the graphics section. You know that the picture you want is in there somewhere, but it's still difficult to find the perfect frame.

Datel's Action Replay is a mite more friendly, despite the system booting up with the German keyboard configuration. The cartridge itself works extremely well, finding the correct screens and sound effects from games with startling accuracy. The power of Datel's cartridge also stands out, enabling the user to carry out more manipulations than the Nordic device, especially where sprites and copper are concerned.

In all Action Replay appears to be the one to go for. The power, speed and ease of use are noticeably superior to the Nordic cartridge. Oh... and it looks better!

AMIGA ACTION REPLAY
£59.99 ■ A500 only ■ Datel Electronics, Fenton Industrial Estate, Govan Road, Fenton, Stoke on Trent, ST4 2RS. 0782 744324.

NORDIC POWER
£TBA ■ A500 only ■ Venlo BV, Postbus 3119, NL-5902, RC Venlo.

DISCLAIMER

Amiga Format **would like to point out that it in no way endorses the use of either these or any other devices for infringing copyright in any form. Commercially available programs, their code, sound and graphics are protected by law. Reproducing them without express written permission is strictly ILLEGAL.**

BACK ISSUE SERVICE

Few in stock, selling out fast – get your copies while they last! All issues only £3.65*, Coverdisk and full postage included



ISSUE 1

SORRY SOLD OUT!



ISSUE 2

SORRY SOLD OUT!



ISSUE 3

SORRY SOLD OUT!



ISSUE 4

SORRY SOLD OUT!



ISSUE 5
Go busting with *Ghostbusters II* on the disk and enter the world of 3D graphics where an alternative reality is just one screen away.



ISSUE 6
Stunning 3D action from *Infestation* on the disk and inside you can get into the hot seat of simulations from tanks and planes, to cars and bikes.



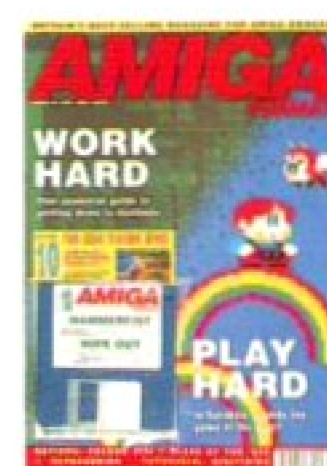
ISSUE 7
The beginner's guide to the Amiga, its insides and how to use it. Plus the start of Dave Jones' series, including source code, on games programming.



ISSUE 8
A wild shoot-em-up, *X-Out*, on the disk. The essential guide to using the Amiga in video inside - you too can be a video star.



ISSUE 9
A special on the latest buzzword in computing, Multimedia, and how the Amiga is ideal for it. *Pipe Mania* provides an extremely addictive disk demo.



ISSUE 10
TWO playable demos on the disk - *Hammerfist* and *Wipe Out*. Inside - a graphics special and getting down to some serious stuff with a feature on databases.



ISSUE 11
Disk and mag combine to take you on a guided tour of fractals and chaos theory. There's a playable demo of the stunning *Tower of Babel*, which is just one of four Format Golds inside.

***UK price only**
Overseas prices:
Europe £5
Rest of World £7
To order your back issues use the subscriptions order form opposite.

DON'T MISS OUT

CHOOSE ONE OF THESE TOP THREE TITLES

F29 RETALIATOR

YOURS FREE (RRP £29.99)

Take to the skies with Ocean's action-packed combat flight sim based on the world's most advanced jet fighters.

RESOLUTION 101

YOURS FREE (RRP £29.99)

Crack crime as you race around a futuristic city in your high-powered, heavily-armed ground skimmer dealing death to the local drug barons.

PIPE MANIA

YOURS FREE (RRP £29.99)

Fantastic and original puzzle action game from Entertainment International - lay the pipes to keep the Flooz flowing.

YOUR NO RISK GUARANTEE

You can cancel your subscription at any time and we will refund you for all unmailed issues.

FREE GAME!

WHEN YOU SUBSCRIBE TO AMIGA FORMAT

PLUS...

You guarantee yourself a regular copy of Britain's leading magazine for the Amiga, absolutely jam-packed with all the information you need to get the most out of your machine.

PLUS...

You make sure you get the tremendous Coverdisk every month, bursting with exciting programs, utilities and playable demos.

12 ISSUES OF YOUR FAVOURITE MAGAZINE *PLUS* COVER DISK *PLUS* FREE GAME – ALL THIS FOR ONLY £34.95!

Or, if you're a bit hard up this month...

6 ISSUES FOR JUST £17.95 (but sadly no free game)

Simply complete the coupon below and return to us ASAP

CAN'T WAIT? Then phone our CREDIT CARD HOTLINE on 0458 74011 and ask for Trevor Witt for a fast and friendly service.

YES! I want to claim my free game *(only applies to 12 issues subscriptions)*

My choice is as follows *(pleae tick one only)*

☐ F29 RETALIATOR ☐ RESOLUTION 101 ☐ PIPE MANIA

Please enter my subscription to *Amiga Format* (tick as appropriate)

☐ UK (12 issues) ....£34.95 ☐ UK (6 issues)...........£17.95

☐ Europe (12 issues) £59.55

☐ Rest of World (12 issues)......£84.55

To ensure you get the best possible service all overseas subscriptions are sent Air Mail

Please also send me the following back issues *(see opposite page)*

1 2 3 4 5 6 7 8 9 10 11 *(please circle)*

Name

Address

Post Code

Total payment £ . My method of payment is (tick your choice)

☐ Cheque (make payable to Future Publishing Ltd)

☐ Visa ☐ Access Expiry date

Card No

Enclose this coupon (together with your cheque if applicable) in an envelope to:

Amiga Format Subscriptions, FREEPOST, Somerton, TA11 7BR

WARNING





THIS SORT OF BILL IF YOU PAY FOR THEM

THIS SORT OF BILL IF YOU DON'T

A pirated game could result in a visit from you know who.



THIS CAMPAIGN IS ORGANISED BY
ELSPA
EUROPEAN LEISURE SOFTWARE PUBLISHERS ASSOCIATION

Any information on piracy should be passed to The Federation Against Software Theft. Telephone 01-240 6756



pd UPDATE

The biggest-ever round-up of the latest and greatest PD utilities, curiosities and demos courtesy of **RICHARD MONTEIRO.**

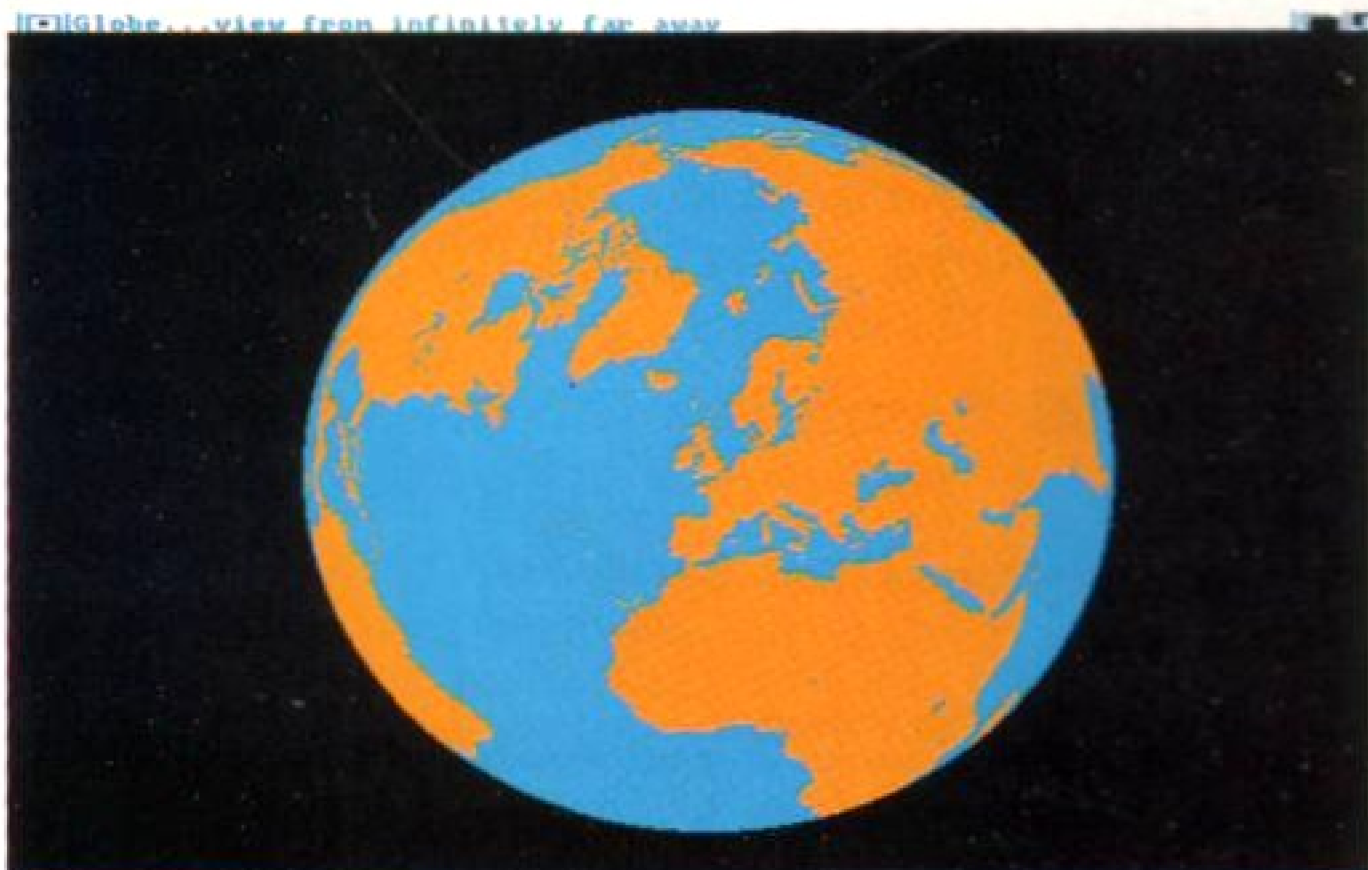
DRAWMAP

Fish Disk 315
GTS: 0770 82234

As its title implies, this is simply a program for drawing representations of the Earth's surface. It can generate flat maps, mercator maps, globe views and orbital views. This is Version 2.0, an update to Version 1.0 on Disk 229. Enhancements include drop-shadows, user text entry and placement, improved event processing and better-looking mouse pointers. There must be a use for it, unfortunately I can't think of one at the moment.



All it takes is someone somewhere to push a knob and the Earth will be flattened. Push the button and say goodbye.



FISH DISK 314
GTS: 0770 82234

Programmers, Fish 314 is for you:

A68K – You may well be familiar with this 68000 assembler. After all, it was originally written in Modula-2 during 1985 and converted in 1987 to C. This is version 2.61, an update to the version on Disk 186. A68K has been converted to accept Metacomco-compatible assembler source code and to generate Amiga objects. Includes source.

ZC – A full K and R C compiler based on a port of the Atari ST version of Sozobon-C. Includes the C compiler main pass written by Johann Ruegg with fixes and enhancements by Joe Montgomery and Jeff Lydiatt, a cc front end written by Fred Fish with enhancements by Jeff Lydiatt and Ralph Babel, an optimizer written by Tony Andrews, an assembler written by Brian Anderson and Charlie Gibb, a linker written by the Software Distillery, generic include files and a C runtime library written by Dale Schumacher, and port work by Jeff Lydiatt. Sheesh, who hasn't had a finger in ZC?

PCQ
Fish Disk 339
GTS: 0770 82234

Believe it or not, PCQ stands for Pascal Compiler... err, Q. The Q doesn't actually mean anything. The fact that author Patrick Quaid shares the same initials is irrelevant. Honest, he says so himself. PCQ is a modest Pascal sub-set compiler that's capable of producing assembly code. On the minus side, the PCQ compiler is slow and doesn't support sets, and code isn't in the least bit optimised.

However, on the plus side: it works for the most part; the compiler supports include files; it allows external references, although you have to do the checking (it isn't Modula-2, after all); records, enumerated types, pointers, arrays, and strings are supported; type conversion *à la* Modula-2 is offered; you can have as many const, var, type, procedure and function blocks as you want; and it's free.

FISH DISK 327
GTS: 0770 82234

ARTM – *Amiga Real Time Monitor* displays and controls system activity such as tasks, windows, libraries, devices, resources, ports, residents, interrupts, vectors, memory, mounts, assigns, fonts and hardware.

MM – An implementation of the game *Mastermind*. In this game you must try to guess a colour combination which the Amiga sets via a random generator. There are six colours which can be set in any combination.

MRBACKUP – A hard disk backup utility that does a file by file copy to standard AmigaDOS floppy disks. Includes an Intuition interface and file compression.

MSH – This program alone makes Fish 327 an essential purchase. *Msh* enables the Amiga to read and write MS-DOS formatted

Demos CORNER

Want to see what your Amiga can really do? Well this is the place...

INTROS
Amiganuts Disk 554
Amiganuts: 0703 785680

UNICYCLE BOB – Well, Phenomena prove once more that BOBs really are beautiful. But there's more to the demo than BOBs: an animated unicycle juggling... you guessed it, BOBs.

EQUALOGO II – Stunning. Slipstream have surpassed themselves. While the bouncing balls, scrolling message and digitised picture of Dirty Harry aren't anything to get excited about, the sampled music track is fantastic. Snippets of speech from Graham Chapman, Clint Eastwood and others accompanies a lively beat. You're treated to such phrases as "This is a 44 magnum, this is a 44 magnum, this is a 44 magnum... and it could blow your head clean off. Do you feel lucky?", "This is for your benefit. Would you kindly wake up!", and "Stop that. It's silly. And a bit suspect I think." The track is really excellent – and refreshingly original. One you simply are gonna have to hear for yourself.



The sound track is *Equalogo II*'s strength. If you listen very closely to the photo you might just be able to hear it...

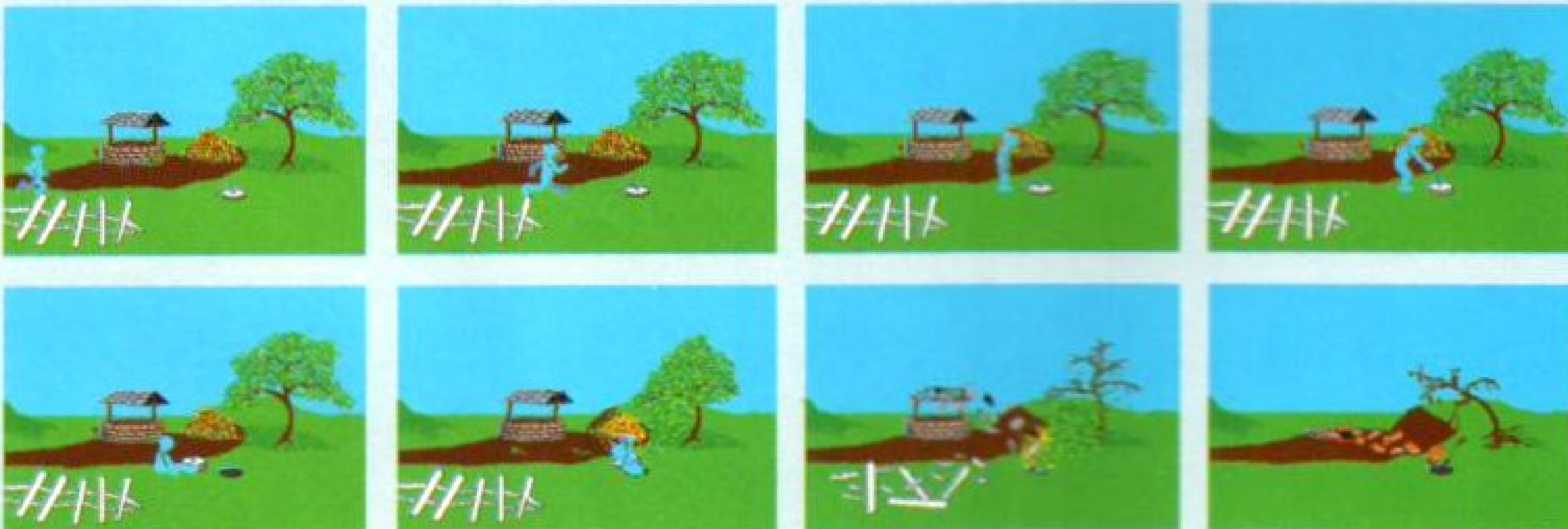


MTV quality or what? *Coma* – should be Number One! Maybe if we were to put it on a 45 and release it via the Cartel...

SEXY – The title suggests titillation, but in truth there's nothing to tease, let alone tickle, your fancy. The only sexy thing in HCC's demo is a sampled voice that insists on screeching "Sexy!" from time to time.

COMA – Oh, wow! This blows everything else out of the disk drive. The combination of acid house beat and hallucinogenic screen effects make *Coma* the most impressive demo to date. Seriously, it's an audio-visual extravaganza you musn't miss. Like the great *Juggler* demo that appeared at the beginning of the Amiga's life, *Coma* is going to become a classic.

FRP ANIMATIONS Senlac Software: 0424 753070



Called simply *The Plug*, this animation features a plasticine-like character. Plastiman bumps into a plug, pulls it and finds his whole world sucked from under him.

Senlac are currently trying to promote the notion of licenseware, and have consequently set up a label entitled Senlacware. Authors who participate in the scheme receive a royalty each quarter on all titles that are sold. Sound idea – come on PDists, support it!

FRP Productions are just one of a bunch of benevolent developers currently embroiled in the scheme. FRP specialise in animation, and as you can see from the images here are extremely proficient at their trade. Along with the naughty-but-nice Rotating Women, you'll find the famous Road Runner, the infamous Star Trek and numerous other very professional animations on their disks.





ABOVE LEFT: A still from the excellent *Coyote Gets Even* animation produced by FRP. ABOVE RIGHT: Ahem, risqué business.

disks. You can use files on such disks in almost exactly the same way as you use files on native AmigaDOS disks. This is a fully functional, read/write version that supports 8, 9, or 10 sector disks of 40 or 80 tracks. It will even work with hard drives containing 12 or 16 bit FATs (file allocation tables). Invaluable.

SOFTFONT – Converts portrait soft fonts for HP LaserJet compatible laser printers to landscape format.

CC GAMES #13
Capricorn Disk 191
Capricorn Computers
021 7070381

After a hard perusal of PD software what better way to relax than by playing PD games? Capricorn's disk comes with five very different games to suit almost all tastes:

CALLISTO – You're in charge of a mining base on Jupiter's moon Callisto. The moon contains nothing more than ice and dirt, but valuable minerals can be obtained from Jupiter by robot miners.

Your job is to collect the ore which is produced and bring it to the moon using short-range nuclear-drive spacecraft.

From Callisto the ore can be collected by long-range ion drive ships for your employers, the Interplanetary Mining Corporation. You will be paid for the ore and must use this money to buy various items of equipment and plutonium fuel.

From this scenario you might deduce the game to be a sophisticated shoot-em-up, but this couldn't be further from the truth. The game is a tough text-only strategy game. A bit of a yawner unless you're into sleepless nights trying to suss the impossible.

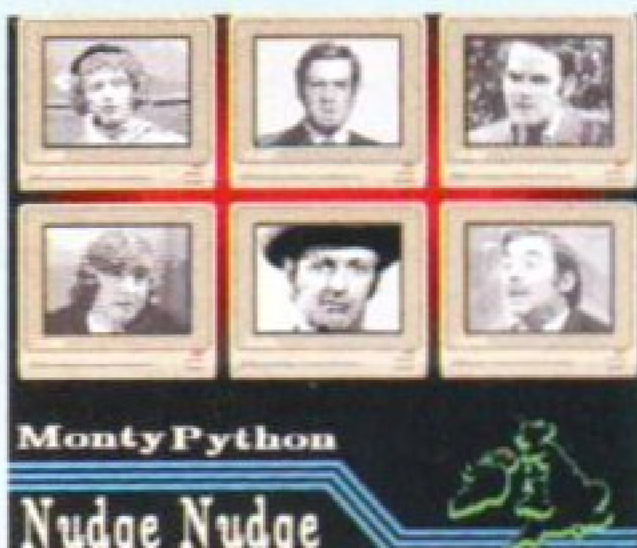
DALEKS – This version of *Daleks* runs on an Amiga and benefits from the machine's speed and colour capabilities. Essentially,



Demos CORNER

NUDGE NUDGE
Nova Disks 150/151
Nova: 0295 262029

Evening squire. Is your wife a goer? know what I mean? Nudge, nudge. Say no more, say no more. A nod's as good as a wink to a blind bat. Say no more, eh?



The sound was sampled using Mastersound via a Sony audio tape player and the images grabbed using Digiview 4 plugged into a Ferguson Videostar. Well, at least the sketch isn't boring.

Is your wife a sport? I bet she is. Has she been around. I bet she has. Say no more. Is your wife interested in photography, eh?. Snap snap, grin, grin, wink wink. Say no more, say no more.

Well from that outburst you might have guessed that Nudge Nudge is a sketch from the outrageously funny Monty Python team. There's little to say about it apart from repeating the above.

Digitised images of the team accompany the sampled sound track. For Python fans only.

CEBIT '90
Deeper Domain Disk 134
Deeper Domain: 01 204 3954

Red Sector have produced yet another phenomenal piece of coding. Their latest, Cebit '90 (or Revenge of Babbnaaseu), is a solid 3D animation extravaganza.

A whole range of objects appear. Many look as though they should be part of *Elite II*. Red Sector have managed to combine a beautifully rendered moving juggler enclosed in a rotating 3D box. The effect is breathtaking.

Numerous other animations – like a volcano spraying multi-coloured, multi-sized BOBs, a gift box unraveling to reveal several BOB shapes, and a BOB starfield – all combine to make a very watchable demo.



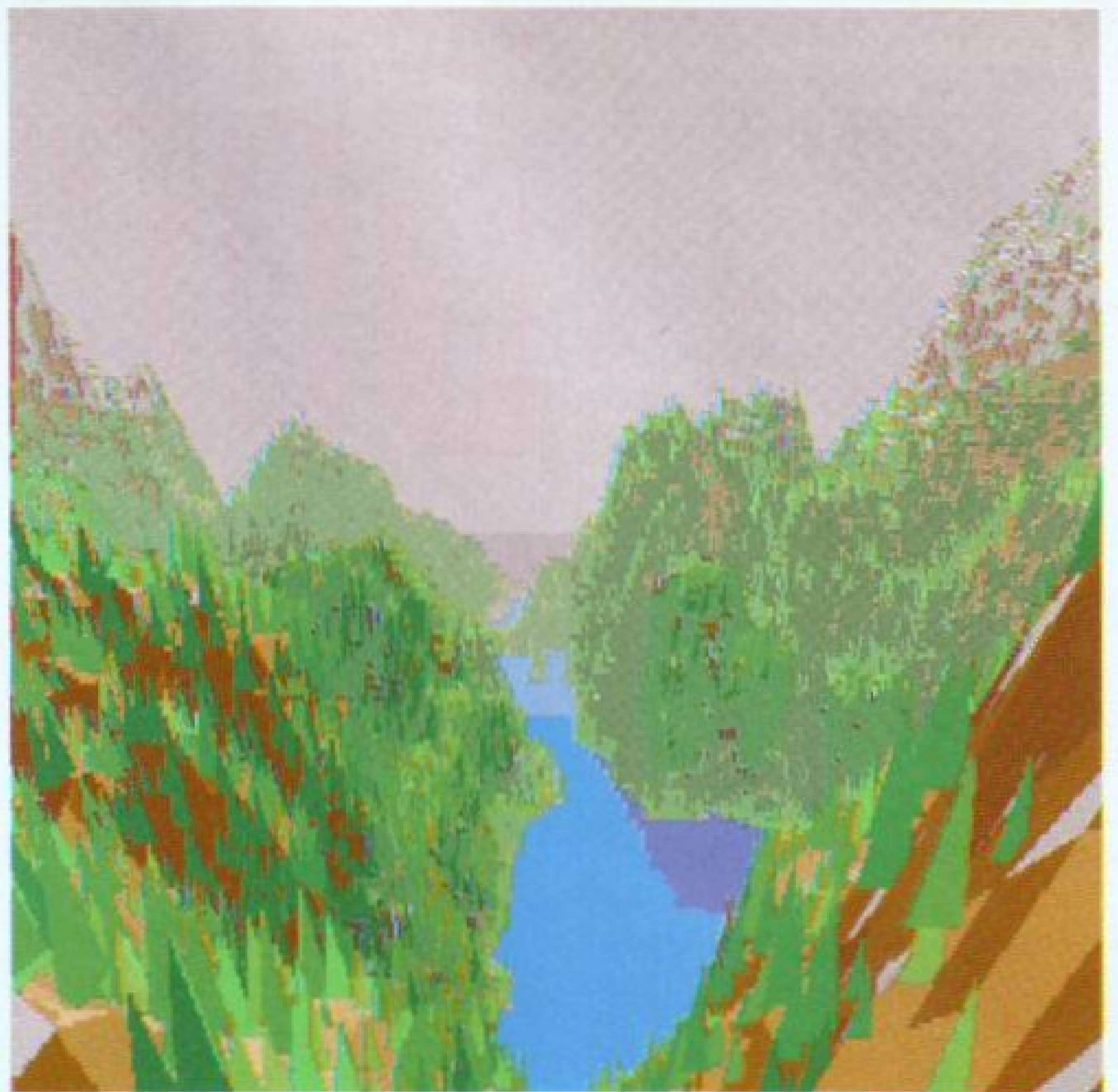
ABOVE: Cebit '90 features speedy solid 3D animations to make Jez San and his Arganouts turn pale.

FRACTAL FLIGHT
PD Soft Disk 477
PD Soft: 0702 612259

You've doubtless dabbled with countless other fractal-producing programs – Mandelbrot generators, Julia set plotters, fractal landscape creators – and are justifiably sick of the subject. *Fractal Flight* is guaranteed to restore your faith in the astounding chaotic beauty of fractals.

The program on PD-Soft's disk is just a demo of Hypercube Engineering's commercial fractal generation and animation package. Hence you only get to see a pretty polygon world rush towards you, but even so, the sight is fabulous and moves at unbelievable speeds.

The 200 HAM frames were rendered in around 16 hours using Hypercube's proprietary 40MHz '030 Amiga accelerator card. The landscape consists of some 750,000 polygons. The animation replay routine allows the fractal landscape to be displayed at 60 fields a second. Little wonder it's so good.







The full *Fractal Flight* demo takes up an astonishing 25Mbytes – naturally the demo on the PD disk has been much reduced.

VIZ SLIDESHOW
Nova Disk 166 Nova: 0295 262029

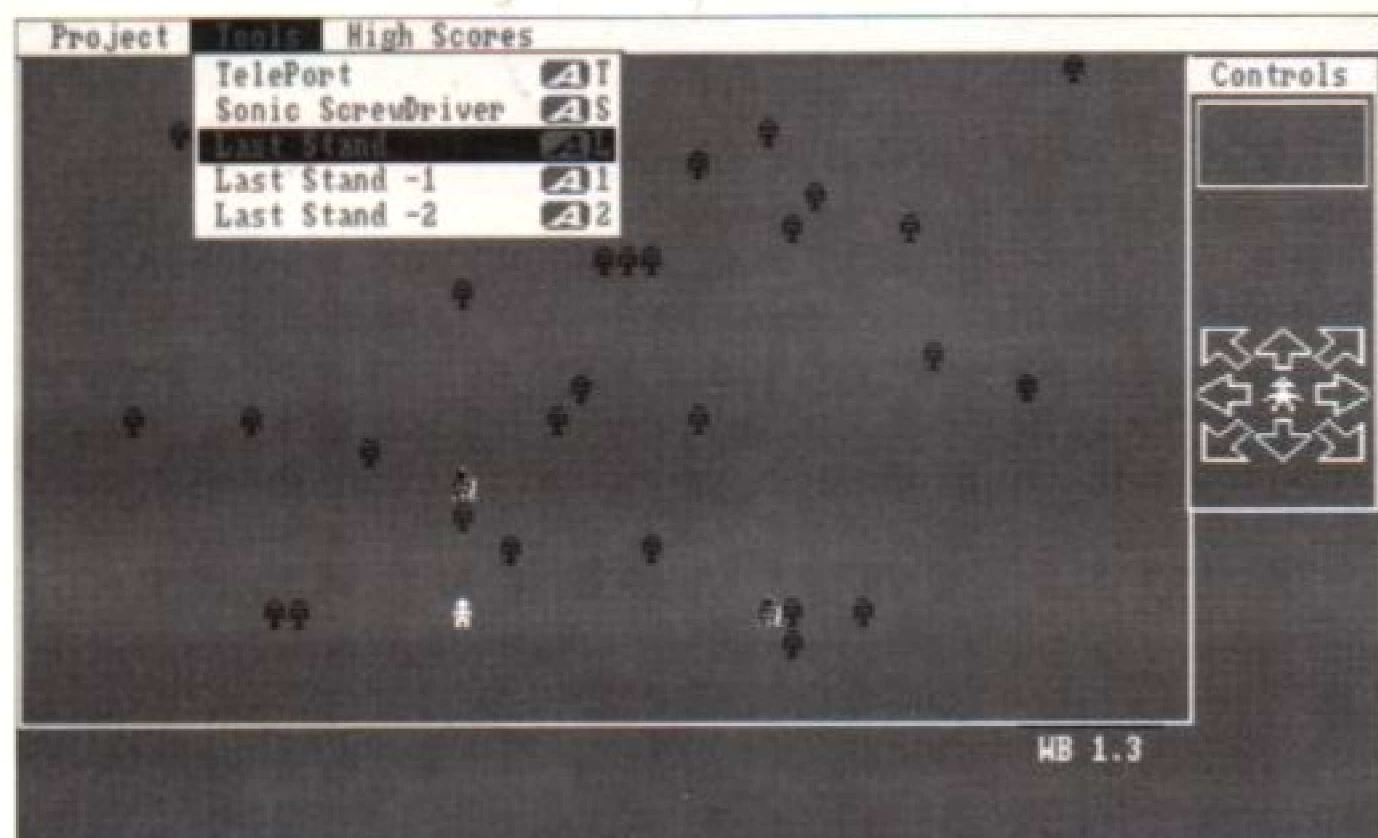
You'll find all your favourite Viz characters HAMified (?) on this disk. Thank Stace Newton for the digitising deed.







Finbarr Saunders (fnarr, fnarr), The Dirty Fat Slags, and Roger Mellie, the man on the telly – they're all there.



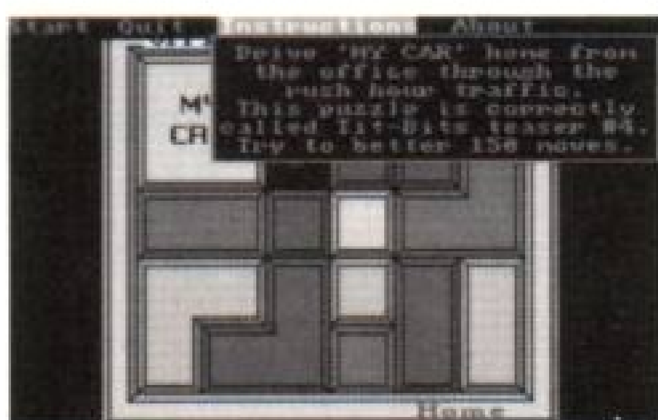
Exterminate, exterminate... now you too can join the Doctor's never-ending battle against the Daleks.

you're Dr Who and must defeat the Daleks by making them bump into each other or by blasting them from close range with your sonic screwdriver. It's just a simple game, but highly addictive.

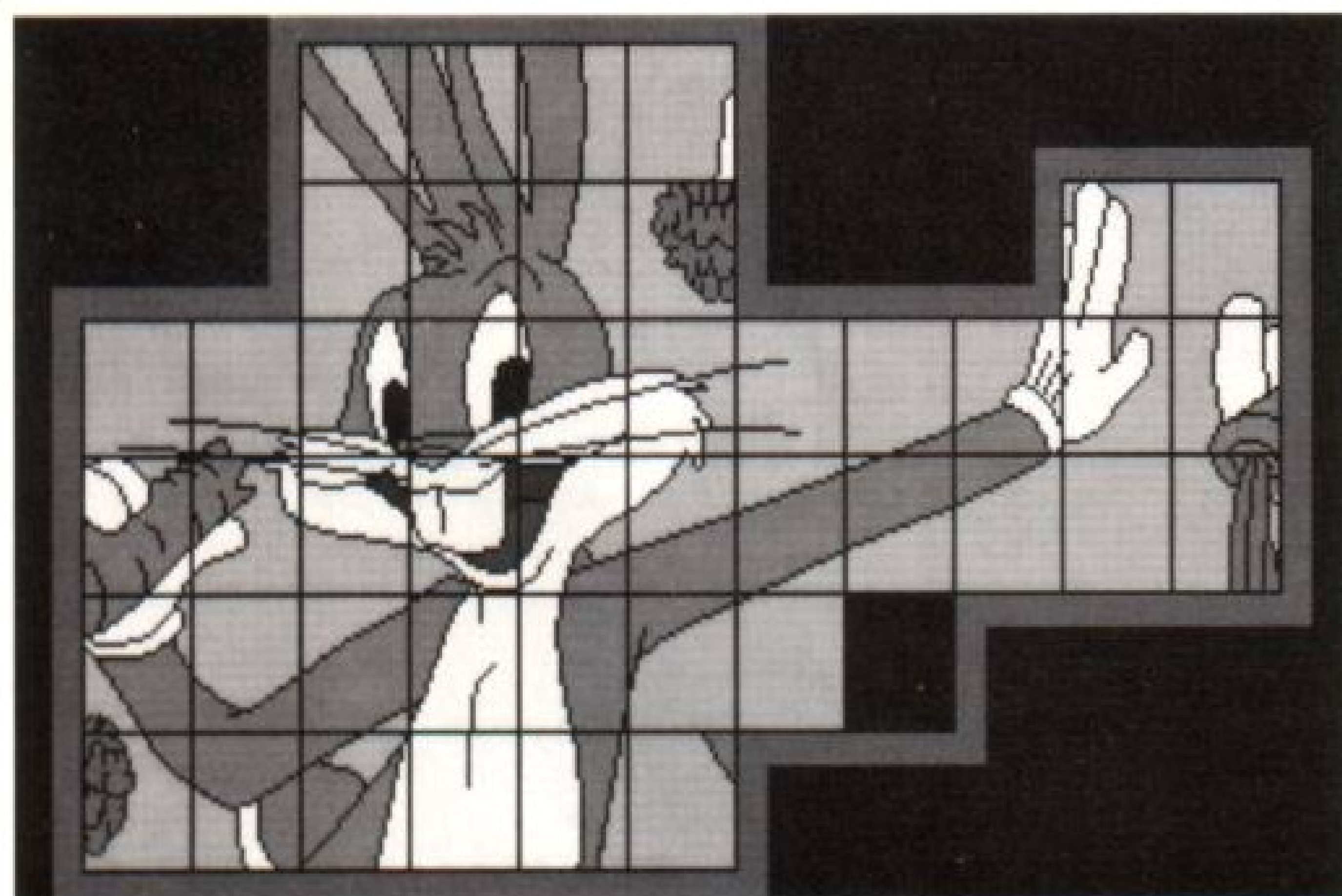
PONTOON – Nothing clever, nothing sophisticated – simply a neat graphical version of the card game *Twenty-One*.

You get dealt two cards and can only play the computer (who cheats badly). The idea is simply to continue picking up cards until the value of all the cards in your hand is as close to 21 as you're likely to get it without exceeding 21. All the usual rules apply.

PUZZ – Times are hard: it's a strain trying to come up with a new name for the tired sliding tile puzzle game. Martin Round may have problems with names, but his versions – for there are many – of tiles are very playable and polished.



BELOW: Can you help Bugs? It looks as if someone has gratuitously hacked his hand off.



Three different puzzle games are included on the Capricorn game disk. All have a different graphical image to order and a different number of tiles to slide. There's one tile puzzle that doesn't even follow the conventional square format. Excellent.

WORLD – The game is in the flavour of text-only adventures like *Adventure of Zork*, and is about as large. It has, however, a sci-fi slant which makes it similar to Infocom's *Planetfall* and *Starcross*.

A good parser means all manner of actions are possible and a save/restore feature lets you halt the action any time and return to where you left off at a later date. Adventure fiends will love it.

ZERG – This is, of course, the latest revision of Mike Shapiro's ever-developing fantasy role-playing game. Mike makes no bones of the fact that *Zerg* is a blatant Ultima rip-off.



Improved graphics, faster scrolling, populated towns, a working combat system, more character statistics and load and save options have all been added to the latest *Zerg*.

You assemble a stalwart band of adventurers comprising... well, yourself and nobody else. You get to explore a mythical world full of sorcery, horrific monsters and fabulous treasure. In short, the typical fantasy role-playing scenario.

Even though the ideas present in *Zerg* aren't entirely original, the game is excellent. And for free you really can't complain. ■

SUPPLIERS

The following companies contribute to the distribution of Amiga public domain software in this country. For their full addresses check the advertisements in this issue of *Amiga Format*, or give them a ring.

George Thomson: 0770 82234, Amiga PD Library: 0742 750623, Capricorn Computers: 021 7070381, Seven Seas PD: 60 Canary Rd, Dungannon, County Tyrone, N Ireland, Demon Software: 0279 842675, Magnetic Media: 0827 59566, EMPDL: 0602 630071, Blitterchips: 0535 667469, Kad-soft UK: 0249 817174, Amiganuts: 0703 785680, Purple PD: 0279 757692, Crazy Joe's: 0709 829286, Nova: 0295 262029, PD Soft: 0702 612259, Softville PD: 0705 266509, Sector 16: 0865 774472, Senlac Software: 0424 753070, Premier PD: 15 Croxteth Rd, Rainford, WCA 0792 772745.

TOP TEN DEMOS

17Bit Disk Numbers
17 Bit Software: 0924 366982

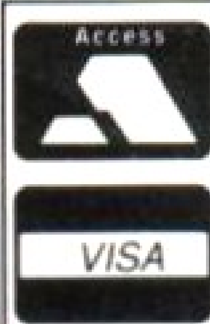
1. NEWTEK DEMO 3 (559/560)
2. PREDATORS MEGADEMO (588/589)
3. THE RUN (591)
4. RUBADUBDUB (604)
5. THE NEW STAR TREK (595/596)
6. KEFRENS MEGADEMO (616/617)
7. FANTASY SLIDE SHOW (622/623)
8. TECHNOTRONIC REMIXES (608)
9. ELVIRA (594)
10. INTROS 31 (587)

TOP TEN PD

GTS Titles
George Thompson: 0770 82234

1. SPACE TRILOGY
2. THE ALL-NEW STAR TREK
3. TV GRAPHICS
4. VIDEO APPLICATIONS
5. LEARN AND PLAY PART 1
6. HOME BUSINESS PACK
7. PD SPECTACULAR
8. TBAG 28
9. SACC
10. EDUCATION WITH THE AMIGA

SENLAC SOFTWARE PD



VISA

14 OAKLEA CLOSE OLD ROAR ROAD ST LEONARDS ON SEA
EAST SUSSEX TN37 7HB TEL: 0424 753070
SOLE DISTRIBUTOR FOR F.R.P. PRODUCTIONS & SENLACWARE

GRAPHICS
IFF PIXS I
IFF PIXS II
IFF PIXS III
IFF PIXS IV
IFF PIXS V
JOE II SLIDESHOW
HAM PIXS
DIGI PIXS I
DIGI PIXS II
PHOTOFILE PIXS I
PHOTOFILE PIXS II
ROGER DEAN PIXS
ROD MATTHEWS PIXS
FANTASY PIXS I
FANTASY PIXS II
FANTASY PIXS III
NASA DIGIPIXS
SPACE VISIONS
PARADISE SLIDESHOW

GLAMOUR DISKS
PLAYBOY SLIDES
SABRINA/SAMFOX SLIDES
SAMFOX SLIDES
UTOPIA
KIM WILDE SLIDESHOW
NAUGHTY NICITITIES
TINA SMALL

GAMES DISKS
RETALIATOR/PACMAN 87
FLASCHBIER
AUTOBAHN 3005
CASINO CRAPS
PDCHESS/TETRISII
MONOPOLY/CLUEDO
BATTLEMECH
MORIA*
LARN
ALL NEW STAR TREK (2 DISKS)
STAR TREK SPACE 1MEG (3 DISKS)
STAR TREK 1MEG (2 DISKS)I
EMPIRE
RISK PD
CRIBBAGE

SENLAC DISK PRICES
2-9	Disks= 1.75 Each
18-24	Disks= 1.50 Each
25 or More	= 1.25 Each

Minimum Order 2 Disks

ANIMATION DISKS
NOT BOING AGAIN *
PROBE SEQUENCE
WALKER I *
WALKER II *
ROSES-FLOWERSHOP
COKEMAN-SMURF
KNIGHT ANIMATION *
CAR DEMO *
ZEUS BUST *
DRAGONS LAIR *
KILLER DEMO *
GHOSTPOOL *
COYOTE * (2 DISKS)
CHARON *
BOINGMACHINE
ALICE/DOGSWORLD *
LUXO TEENAGER *
WAVESAILING * (2 DISKS)
GYMNAST ANIMATION *
CONGAMAN ANIMATION *
MINER ANIMATION *
JUGGLER ANIMATION *
BUSYBEE ANIMATION *
ORBITER/SPACESTATION *
THE BOINGS *
APPLECUS ANIMATION *
WALK3 ANIMATION *

UTILITIES
ESA UTILS
FULLFORCE UTILS
FUTURE COMPOSER
DISKSALV V4.2
GHOSTWRITER
SID (DIRMASTER!)
NIB BACKUP (2 DRIVES)
CROSS DOS
VIDEO PROGRAMS (2 DISKS)
GRAPHICS UTILS (2 DISKS)
BOOTBLOCK PROGS (2 DISKS)
RAYTRACING
LC-10 CUSTOM DRIVER
PRINTER DRIVER GENERATOR

FINANCIAL/BUSINESS
WORDWRIGHT/AMIGASPELL
BANK'N
ANALYTICALC *
RIM DATABASE
QBASE/VISICALC
CLERK
RIM DATABASE (HARD!!)
SPREAD-SPREADSHEET
INVENTORY

MISCELLANEOUS
OH OBSCENE I
OH OBSCENE II
INSANITY II
SPRITE MACHINE
VIRUS DISK I
VIRUS DISK II
VIRUS DISK III
DRACO COMPILER (2 DISKS)
EXPLODINGHEAD/HANDCHOP!

MUSIC
HIFI PLAYER *
COMAPCT DISK PLAYER
RIP ERUPTIONS
ROB HUBBARD MUSIC
ACCIID MUSIC
JUNGLE COMMAND (2 DISKS)
GAMES MUSIC CREATOR
FUTURE COMPOSER
SOUNDTRACKERS (2 DISKS)
8 CHANNEL SOUNDTRACKER
PERFECTSOUND SAMPLER
AUDIOMASTER DEMO
FLASH TEAM MUSIC

DEMOS-DEMOS-DEMOS
NEWTEK I *DF1: (2 DISKS)
NEWTEK II *DF1: (2 DISKS)
PUGGS IN SPACE
SPACE ACE DEMO
VICE WORKBENCH HACKS
DE-MOB I
DE-MOB II
VANGELIS DEMO *
UNIVERSAL PICTURES I & II
RED SECTOR DEMO (2 DISKS)
SCIENCE 451 DEMO
BSS JOKES/ANIMS
HCC TOXTETH DEMO
DEXTON MEGA DEMO
FREDDY KRUGAR SAMPLE
HIGHCLASS UK DEMO
REBELS MEGA DEMO

SENLACWARE DISKS
These disks are now 3.00 each, a contribution is now passed to the Author of the program if you wish to participate contact SENLAC now for more details
FRP ROTATINGWOMEN
FRP ROADRUNNER
FRP MARNSATTACK
FRP PAULA VI
SEVEN TOWERS NUDGE NUDGE
DEMO (2 Disk Digi Sample)

Prices include UK Post/Packing add1.00 Overseas Europe Airmail charged rest of world

CANDO CANDO CANDO
New demonstation Disk for this amazing Hypercard is NOW available from SENLAC ONLY 3.00. **CANDO RETAILS AT 149.95 OUR PRICE 121.99**

LIFE MEMBERSHIP LIBRARY AND FREE P.D. ONLY £1

PRICES;
1-5 = £1.50
6-10 = £1.25
11+ = £1.00
per disk

PREMIER P.D.

SAYS *NO* TO PROFIT, AND GIVES IT BACK TO OUR MEMBERS!

PRICES STATED INCLUDE DISK
SUBTRACT 50p IF YOU SUPPLY DISKS
Send cheques or P.O.s to:
PREMIER P.D. 15 CROXTETH Dr. RAINFORD, MERSEYSIDE, WA11 8JZ.

NOVA brings you......A new concept in Amiga PD - VALUE



FAST, PROFFESIONAL AND FRIENDLY AMIGA PD SERIVCE

HIGH QUALITY PUBLIC DOMAIN DISKS

£2.00 OR LESS*

WHY PAY MORE?

Two Disk Catalogue £2.00
We'll get any PD disk for you - AT NO EXTRA CHARGE
NO EXTRA FEES - Write for overseas postage
FREE MONTHLY PRIZE DRAW
ALL Libraries available (Fish, TBAG, AGATron etc.)
Latest demos, animations etc.
Discount Hardware/Software/Disks etc.
i.e. PHOTON PAINT 2 £49.99 SONIX £39.99

*Prices start at £0000
Cheques/POs Payable to NOVA

NOVA (AF2), 30 Parsons St, Banbury, Oxon OX16 8LY ☎ (0295)262029

These are brief descriptions, disks may contain much more

»»»»»» ***Sonix Songs, player/graphic screen***
USON1 Duelling, Electric Dream, Wonderful +
USON10 Human Power, Mindbreaker, Robocop +

»»»»»» ***Slideshows with background music***
USLID1 'Heroes' tune + 16 hi-res pictures
USLID4 Fantasy pictures by The Dark Lord

»»»»»» ***Music at it's best, with graphix***
UMUS1 Ten original tunes, brilliant!
UMUS13 Metromania, Sahara, Lonely + 3 others

»»»»»» ***Intro's and Demo's, the best***
UINT1 O.G.D, PARTY!, EUROPE + 7 others
UINT4 TEARDROPS, MAGIC FIELD + 5 others
UINT14 COMBINATION, SUBWAY, WEAPON + 4

»»»»»» ***Great GAMES to play at home!***
UGAM1 COSMOROIDS, ROLLERBALL, LADYB
UGAM2 FLASCHIBER - The game, brilliant
UGAM3 LINGO, BALLY, NIGHTWORKS & YOUPI

»»»»»» ***Some of the best ANIMATIONS***
UANIM1 SPACE animation - needs 1meg RAM
UANIM2 UGA and STAMP animations, good!
UANIM3 RUNNING MAN, TURNING MAN, UGA
UANIM5 HAPPY GUY, WINDOW, F15 MIRROR

»»»»»» ***SPECIAL disks - a special collection***
USPEC1 ZOUNDMONITOR, like ST but better
USPEC4 GHOSTWRITER, make your own screens
USPEC11 GAME MUSIC CREATOR, brilliant!
USPEC13 QL EMULATOR, just what it says! plus 2 support disks available



official UK distributor for the range of quality disks
UGA

NEWSFLASH
Produced by NUK and UGA
This disk magazine is distributed around the world and is acknowledged as the BEST. Packed with information, these great disks, along with the *SUPPORT DISKS*, are now available monthly from Softville. We carry the full range and Issues start at No6, phone for the very latest version.
£2:99 each or £5:50 a set.

»»»»»» ***Utilities you can't get elsewhere***
UUTIL1 SinusCreator, Bootcontrol, CLIWizard, Iconlab, CRLoad, Mandlevroom, Bootune
UUTIL3 Tetrapack, Showfont, Bootback, Disksalv, TrackerX, Iconizer, SceneryMaker etc. etc.
UUTIL9 KickSaver, Terrainsculpt, StarEditor, Bootext, Sonixpeek, Flowripper, Linkiller etc. etc.

»»»»»» **We stock over 90 of these fabulous UGA disks, all easy to use, menu driven and exclusive to us!**

PLUS we have the complete FRED FISH collection, Currently over 290 disks, with more added monthly

PLUS the A.P.D.C collection
PLUS the PANORAMA collection
PLUS the AMICUS collection
PLUS the SLIPPED DISK collection
PLUS the T.BAG collection

And of course our own 'SOF' collection of Utilities and the very BEST demo disks, now numbering well over 450 in all!

STARTER PACK
Choose any 5 disks, get 5 blank disks + labels & a Library case for only £18:50
VIRUS KILLER DISK
loads of killers inc. VIRUSX v4.0
ONLY £1:50 each (state Amiga)

Send an A5 size envelope (28p stamp) for a FREE copy of our 80 page catalogue. State CLEARLY the make of your computer

Over 1000 disks FULL of great programs.
1-5 disks - £3 each
6-9 disks - £2:75 each
10 and over - £2:50 each
Buy 10 - get another FREE
all prices inc. of Disk, Post & packing & VAT

Callers **SOFTViLLE** *Welcome*
Unit 5, Stratfield Park, Elettra Ave, Waterlooville, Hants PO7 7XN
Ring for advice or to order 24hrs on
0705 266509
Fax 0705 251884





PUBLIC APOLOGY

M.D. Office Supplies would like to take this opportunity to apologise to all its competitors. As always we will supply the HIGHEST QUALITY Discs, Storage Boxes, etc, at the LOWEST POSSIBLE PRICES. IN FACT WE GUARANTEE IT

AMAZING PRICES SUPERB QUALITY UNBEATABLE VALUE

3½ 3.5" DISCS & BOXES 3½

25 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box	£21.95
35 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box	£29.95
45 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box	£34.95
55 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box	£39.95
65 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box	£44.95
100 3.5" DS-DD 135 TPI with 100 Capacity Lockable Storage Box	£59.95
150 3.5" DS-DD 135 TPI with 2, 100 Capacity Lockable Storage Boxes	£84.95
200 3.5" DS-DD 135 TPI with 2, 100 Capacity Lockable Storage Boxes	£94.95

OUR 3.5" DISCS ARE **VERY CAREFULLY SELECTED** TO GIVE YOU 100% ERROR FREE PERFORMANCE AND UNQUESTIONABLE RELIABILITY. EACH DISKETTE IS SUPPLIED WITH OUR 100% NO QUIBBLE GUARANTEE AND IS SUPPLIED WITH LABELS

5¼ 5.25" DISCS & BOXES 5¼

25 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box	£13.50
50 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box	£18.50
75 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box	£24.50
100 5.25" DS-DD 96 TPI With 100 Capacity Lockable Storage Box	£29.95

OUR 5.25" DISCS ARE **VERY CAREFULLY SELECTED** TO GIVE YOU 100% ERROR FREE PERFORMANCE. EACH DISC IS OFFERED WITH OUR 100% MONEY BACK GUARANTEE AND IS SUPPLIED WITH LABELS, ENVELOPES, W.P.

HIGH DENSITY 3.5" DISCS

10 DS HD 3.5" Discs	£14.99
30 DS HD 3.5" Discs with 50 Capacity Box	£49.99
50 DS HD 3.5" Discs with 100 Capacity Box	£64.99
100 DS HD 3.5" Discs with 100 Capacity Box	£110.00
150 DS HD 3.5" Discs with 100 Capacity Box	£149.95

PRICE & QUALITY GUARANTEE

We pride ourselves on offering you the very Highest Quality products at the best possible prices. If you should ever see a comparable product offered cheaper in this magazine DO NOT HESITATE give us a call because we won't match it:

WE WILL BEAT IT - GUARANTEED

LOW LOW PRICES FOR BULK BUYERS

For all you large users we have some unbeatable bulk rates on our superb DS-DD 3.5 discs.

300 DS DD 135tpi	£139.95
400 DS DD 135tpi	£179.95
500 DS DD 135tpi	£220.00
600 DS DD 135tpi	£258.00
800 DS DD 135tpi	£335.00
1000 DS DD 135tpi	£389.95

As always lifetime guaranteed, unquestionable reliability, each disc is supplied with label.

NEW EXCITING PRODUCTS

New, New, New products to enhance your computers productivity and performance.

External Disc Drives, slimline, very quiet, very reliable .... only £79.95

Replacement Mice, smooth operation, precise movement .... only £29.95

2 Piece Universal Printer stands (cuts down on space) £6.95

Stackable disc boxes 80 capacity and lockable.
1off - £9.95 3 off - £8.95 5 off - £7.95
Can be stacked horizontally or vertically as you please.

Tilt 'n' Turn 14" Monitor stand, a superb investment .... only £14.95

Data Switches 2 way manual switch (State serial or parallel) .... only £12.95

M.D. OFFICE SUPPLIES

18 CRESCENT WAY, FARNBOROUGH, KENT BR6 9LS
TELESALES HOTLINES: 0689-61400





Trade Accounts Welcome | All prices include VAT and Delivery UK only E/OE | Education Orders Welcome

PROTON SOFTWARE

Tel: 0462 686977 24 Hour. FAX 0462 673227



FREE PRICE LIST AVAILABLE	FREE GAMES WITH SELECTED TITLES	£1.00 OFF NEXT PURCHASE SELECTED TITLES	PERSONAL SERVICE MON-SAT 9 - 6PM	PRODUCT IN STOCK SENT SAME DAY	CALL FOR SPECIAL OFFERS	CALL NOW 0462 686977

AMIGA

Space Harrier II	£16.99
Space Ace	£28.99
Chase HQ	£17.99
Turbo Outrun	£16.99
Manchester United	£16.99
Falcon	£16.99
Scrambled Spirits	£14.99
Battle Squadron	£16.99
RAC Rally	£16.99
Cyberball	£14.99
Carrier Command	£16.99
Damocles	£16.99
Dragons Breath	£23.99
Infestation	£16.99
Midwinter	£22.99
TV Sports Basketball	£22.99
Kick Off	£13.99
TV Sports Football	£22.99
F29	£16.99
Padland & Pacmania	£19.99
Conflict Europe	£8.99
Time & Magik	£8.99
Football Manager II	£13.99
Double Dragon II	£16.99
Populous	£16.99
Lost Patrol	£16.99
Rainbow Islands	£16.99
Wayne Gretzky	£17.99
Pipemania	£16.99
Sim City	£19.99
Fiendish Freddy	£16.99
Escape from Singes Castle	£28.99
Bomber	£22.99
Shadow Of The Beast	£24.99
X Out	£16.99
Operation Thunderbolt	£16.99
Magnum 4	£24.99
Ghouls & Ghosts	£16.99
Cabal	£16.99
Ninja Warriors	£16.99

AMIGA

Future Wars	£16.99
Deluxe Video III	£78.99
688 Attack Sub	£16.99
Flight Sim II	£28.99
Ultimate Golf	£17.99
Leisure Suit Larry II	£26.99
Super Cars	£14.99
P47	£16.99
It Came From Desert (1 meg)	£22.99
Black Tiger	£17.99
Dungeon Master (1 meg)	£22.99
Battle Chess	£16.99
Conqueror	£17.99
Warhead	£17.99
Hound Of Shadow	£17.99
Kings Quest Triple	£19.99
North & South	£16.99
Bloodwych	£17.99
Space Rogue	£17.99
Test Drive II	£17.99
Stryx	£17.99
Knights of Christalion	£22.99
Gunship	£16.99
Pinball Magic	£16.99
Bodokan	£22.99
Grand National	£13.99
Hot Rod	£16.99
Iron Lord	£16.99
Tower Of Babel	£23.99
Footballer Of the Year	£13.99
Lost Dutchmans Mine	£16.99
Castle Master	£16.99
Wind Walker	£23.99
Beyond Dark Castle	£23.99
Bloodwych Data Disc	£11.99
Precious Metal	£16.99
Baal	£8.99
Menace	£8.99
Ballistix	£8.99
Speedball	£9.99

AMIGA

Player Manager	£16.99
Xenon II	£16.99
Batman - Movie	£13.99
Powerdrift	£13.99
Ghostbusters II	£16.99
Last Ninja II	£16.99
New Zealand Story	£13.99
Pro Tennis Tour	£16.99
F18 Interceptor	£13.99
Blood Money	£16.99
Space Quest III	£29.99
F16 Combat Pilot	£16.99
Supreme Challenge	£23.99
Extra Time	£7.99
Pirates	£16.99
Chaos Strikes Back	£16.99
Jack Nicklaus Golf	£16.99
Giants	£23.99
Xenomorph	£16.99
Winners	£23.99
Hammerfist	£16.99
Chronoquest II	£22.99
Blue Angels	£16.99
Premier Coll III	£22.99
Sherman Tank M4	£16.99
Dan Dare 3	£16.99
Ivanhoe	£17.99
Carthage	£16.99
Cloud Kingdoms	£16.99
Colossus Chess X	£16.99
Barbarian II	£17.99
Elite	£16.99
Zombie	£17.99
Populous Promised Land	£8.99
Bad Blood	£24.99
Treasure Trap	£17.99
Escape From Hell	£17.99
Liverpool	£17.99
Gunboat	£17.99
Rorkes Drift	£24.99
Ultima VI	£26.99

AMIGA

Astro Marine Corps	£17.99
Colorado	£17.99
Ghosts n Goblins	£16.99
Leaving Teramis	£16.99
Dragon Flight	£24.99
Operation Stealth	£18.99
World Cup Soccer	£14.99
LHX Attack Chopper	£34.99
Klax	£14.99
Fred	£18.99
Planet of Robot Monsters	£14.99
Passing Shot	£14.99
Table Tennis	£14.99
Hyperaction	£16.99
Combo Racer	£16.99
Midi Interface	£22.99
Italia 90	£4.99
Hunter Killer	£4.99
Battle Ships	£9.99
Treasure Island Dizzy	£4.99
Jump Jet	£4.99
Music X	£129.99
Photon Paint II	£19.99
Deluxe Paint II	£59.99
Triad III	£19.99
Kid Gloves	£16.99
F19 Stealth Fighter	£24.99

AMIGA

Cheetah 125+ Joystick	£8.99
Navigator + Auto	£8.99
Fast Fax	£599.00
Action Service	£4.99
Impossamole	£16.99
Wipe Out	£16.99
Here With The Clues	£16.99
Sherman M4	£16.99
Defenders of the Earth	£13.99
Magnum 4	£22.99
Dragons Breath	£22.99
Rotor	£13.99
The Cycles	£16.99
Powerboat	£16.99
Triad 3	£22.99
Nuclear War	£13.99
International Championship Wrestling	£16.99
Sim City	£19.99
Conqueror	£16.99
Kick Off II	£13.99
Football Manager II World Cup Edition	£13.99
Treasure Trap	£16.99
Jumping Jackson	£16.99
CHX Attack Chopper	£29.99
Atomix	£13.99

AMIGA

Triad II	£9.99
Black Tiger	£16.99
Balance Of Power 1990	£16.99
Trivial Pursuits	£9.99
Ultima VI	£27.99
Battle Chess	£16.99
Barbarian II	£16.99
Blue Angels	£16.99
Corvette	£19.99
Falcon	£19.99
Giants	£19.99
Laser Squad	£12.99
Liverpool	£16.99
North and South	£16.99
Nevermind 13	£13.99
Powerdrome	£16.99
Amos	£27.99
Beverley Hills Cop	£13.99
Colossus Chess 10	£16.99
World Cup Compilation	£16.99
Microprose Soccer	£16.99
Oil Imperium	£16.99
Tank Attack	£16.99
License to Kill	£4.99
Supreme Challenge	£16.99

If the product you're looking for is not here give us a call. 1000's more titles in stock. Orders under £10.00, please add 50p per item p&p. Products in stock usually sent same day.

PRODUCT	FORMAT	COST
	TOTAL	

PO/Cheques payable to: PROTON SOFTWARE. New releases sent on day of release.

NAME ....

ADDRESS ....

....

Send to: **PROTON SOFTWARE (AMF)**, ENTERPRISE HOUSE, BLACKHORSE ROAD, LETCHWORTH, HERTS SG6 1HD Tel: (0462) 686977 Fax: (0462) 673227

AMIGANUTS UNITED



LOW PRICES - HIGH QUALITY - FAST SERVICE - IN THE TRUE SPIRIT OF PUBLIC DOMAIN PRICES START AT ONLY 50p PLUS SELECTED FREE COPIES WITH EVERY TEN DISKS.



Amiganuts is the official U.K distributor of the T.Bag disk of the month series from Tampa Bay U.S.A. Each auto-booting disk is packed with games /utils/graphics/music. The very latest always available at £1.50 each

HERE IS A SMALL SELECTION FROM THE THOUSANDS OF PROGS AVAILABLE

12 - (1) Amiopoly (game) English version
24 - (2) The Xmas song (x-rated)
39 - (1) Turbobackup (excellent PD copier)
40 - (1) Polyscope/slideshow (Electronic Arts)
66 - (1) The perfect sound editor
72 - (1) Slideshow (x-rated)
74 - (1) Safe Sex (funny but x-rated)
84 - (1) Intro maker (nice utility)
113 - (2) Music invasion 3 (with Pacman game)
230 - (1) Music (44 different scores)
262 - (1) Watership Down (nice picshow)
284 - (1) Puzzle game (x-rated)
287 - (1) Official NASA space pictures
300 - (1) The classics by Rob Baxter
305 - (1) Near professional database
311 - (1) Stamp Collector (animation)
326 - (1) Powerpacker (The BEST PD cruncher)
358 - (1) Pirhana FISHTANK (funny)
371 - (1) Phoenix MIAMI MAN (game)
378 - (1) The excellent ARP V1.3 (utility)
389 - (1) The hilarious PUGGS IN SPACE (animation)
392 - (1) Flaschbier (game with full level editor)
417 - (2) The RAF megademo
472 - (2) Predators megademo (includes 2 games)
489 - (1) Vision megademo
507 - (1) 30 useful virus killers
515 - (2) Newtech demo reel 3 (1 MEG)
525 - (1) Star Trek (1 MEG) 1 disk, NO SAVE VERSION
528 - (1) The holy grail (1 MEG GAME)
528 - (1) Animated sprite designer (utility)
540 - (1) MSH: reads/writes PC720 (utility)
542 - (1) Bootblock champion III (excellent utility)
555 - (2) Python music (Nudge Nudge)
562 - (2) Laurel and Hardy (Lonesome Pine)

Price £1.50 per disk, includes P&P, note: (*) indicates number of disks in set.

HERE ARE FIVE EXCELLENT DISKS THAT ARE WORTH ADDING TO YOUR COLLECTION.

DISK 571: MED V2.01e The best music player/editor available to date, it will load most soundtracker modules and it also supports Midi sequencing, (this is an update to V2, that is on Fred Fish 349, however, this one has all bugs fixed).
DISK 576: A special Education disk, packed with progs for the children.
DISK 577: Eight extremely helpful utilities for the hard drive user.
DISK 284: Picture puzzle game. 16 adult pictures that you have to compile.
DISK 581: SID updated version 1.6 by Timm Martin, this dir utility is the best thing since sliced bread. (Please send Timm the requested shareware fee)

Please note that Disks 571/576/577/284 & 581 are £2.00 each inc. P&P

LATEST CATALOGUE DISK AVAILABLE AT £1.50 (INCLUDES POST & PACKING)

Make cheques/Postal Orders payable to: AMIGANUTS UNITED 169, DALE VALLEY RD, HOLLYBROOK, SOUTHAMPTON SO1 6QX. PHONE 0703 785680

PLEASE NOTE: Some demos contain language that may be considered offensive.

CHECKMATE DIGITAL LIMITED



A1500 Expansion Unit

for the Amiga A500

For further details / prices ring

Telephone 071-923 0658

CheckMate Digital Limited,
80 Mildmay Park, London N1 4PR

Fax: 071-254 1655

Workbench

In a special edition this month, we pick out some of the most useful hints and tips from past issues just in case you missed out...

TO B OR NOT TO B

I am considering upgrading to an Amiga 2000, but Commodore seem to produce two different versions, the A2000 and the B2000. What is the difference between these two machines and will they still run software for the A500?

M Wright
N Ireland

The Amiga 2000 has undergone several major upgrades since its original release. The latest version you can buy is the B2000 Revision 6 that includes the new ECS Agnus, giving access to a full megabyte of chip RAM.

The original release of the 2000, the A2000, has been discontinued and so isn't worth even considering if you want to keep up to date.

The difference between this original 'A' machine and the current model Bs (sorry, Acorn!) is that the A2000 had no composite output, the second 512K of RAM was on add-on card and the machine used the old rectangular Agnus (therefore making it incompatible with the soon (or eventually?) to be released Enhanced Chip Set upgrade).

BACK FROM THE DEAD

I have been experiencing a phenomenon called Lazarus. There are occasionally bad disks from PD suppliers that require the Workbench DiskDoctor treatment. On re-formatting the disk, it often displays the message 'All Data on LAZARUS will be lost, do you want to continue?'. Could you please tell me what the hell is Lazarus? It is seldom that that the DiskDoctor is able to fix these disks anyway and having to return disks continuously is becoming a real pain.

P Black
Stevenage, Herts

Who hasn't been reading their Bible recently, then? Lazarus was the chappie that Jesus supposedly brought back from the dead. "What has this got to do with the Amiga?" I hear you ask. Well, when the Diskdoctor utility rescues a corrupt disk, it automatically renames the disk to Lazarus. Think about it for a while and you'll soon realise that this is another classic example of what is commonly known in the trade as a 'programmer's joke'.

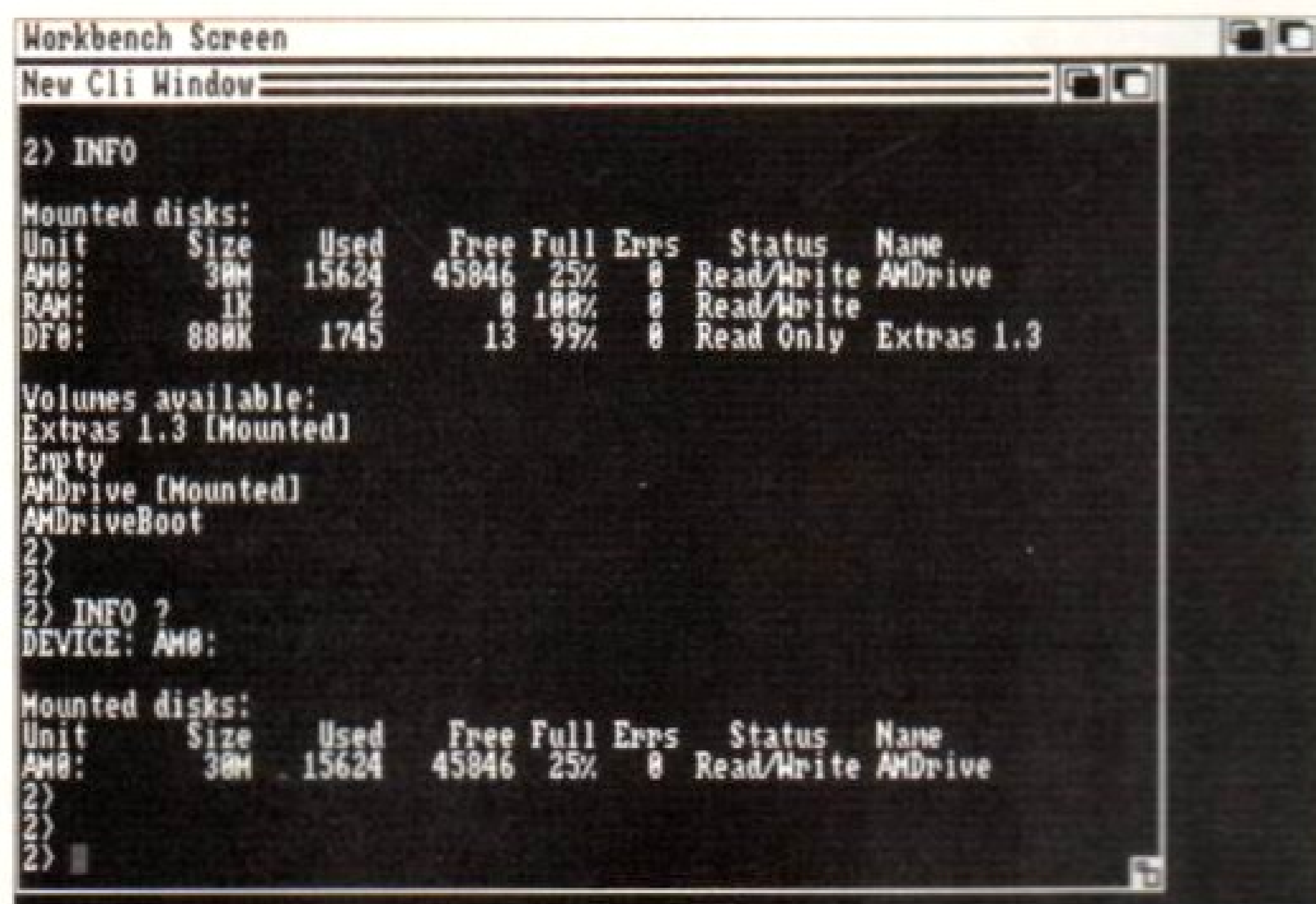
GIVE ME SOME INFO!

When using my Amiga for programming, I often find that I need to know how much disk space is available on a particular disk in my drive. At the moment I have to load up the *RSClock* program that was on the Coverdisk of *ST/Amiga Format*'s second issue.

Unfortunately, I don't want to have to load this program every time I want such a mundane piece of information. Is it possible to write a machine code program (I have DevPac 2) that would tell me what I need to know?

P Stevenson
Bishops Stortford

You're making life very difficult for yourself. All Amiga Workbench disks feature a little CLI command called 'INFO' which will tell you everything you need to know. To use it, just type INFO and press return. The command will then tell you the amount of space used and available on all drives, hard or floppy, that are currently connected to the system.



Need to know how much space is free? See 'Give Me Some Info!'



Converting pictures from HAM is easy: see 'Ham, Chips and Ham'.

HARD LOCK!

Protecting important data on a floppy disk from accidental erasure is a simple process: just flick the write protect tab to the correct position and your data is (fairly) safe. But what do you do when you have a hard disk? Try as hard as you might, you'll never find a write protect tab on your hard drive!

Luckily, if your hard drive is formatted under the new Fast File System that was introduced under Version 1.3 of the operating system, then you'll be glad to learn that there is a way of protecting your valuable data. Any Fast File System drive or partition may be temporarily protected against deletion using the Workbench 1.3 Lock command.

The lock command allows you to set the write protection status of drive or partition, which will remain locked until the system is rebooted or you turn the lock off yourself. Optionally, you can even assign a four character password to the locked partition so that only you can then unlock it. The syntax of the Lock command is LOCK <FFS DRIVE/PARTITION> [ON/OFF] <PASSWORD>.

For example, if you wanted to lock your hard drive without a password, you would simply enter Lock DH0: ON. To unlock the drive again, just enter Lock DH0: OFF. If you wanted to lock your drive with a password, you would enter Lock DH0: ON FRED, where 'FRED' is the password to be used. To unlock the drive, you would then have to enter Lock DH0: OFF FRED. Trying to enter just Lock DH0: OFF on a password protected drive will not work.

T Ralph
Broadstone, Dorset

HAM, CHIPS AND HAM

Do you know of any utilities (preferably Public Domain) that will be of use in converting HAM pictures to non-HAM format for use within paint packages such as *Deluxe Paint* etc?

R Musson
Edinburgh

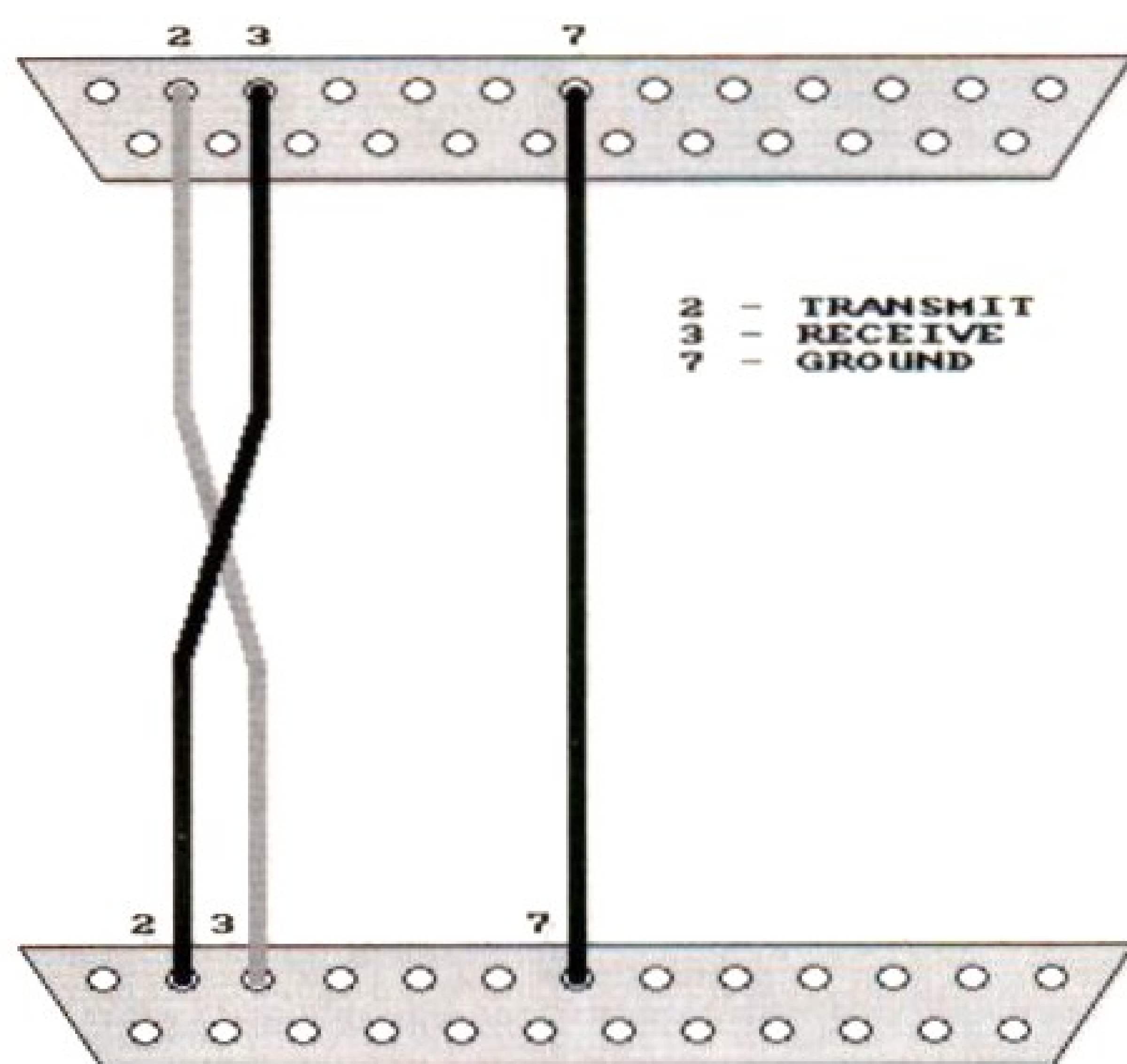
CABLE CRISIS

What exactly is a datalink/null modem cable? I have seen them mentioned in reviews of some of the more recent games (such as *Stunt Car Racer, F16 Combat Pilot* etc). How much do these little devices cost?

James Brown
Doncaster

A null modem or datalink cable is simply a serial cable that provides unbuffered communication between two machines (regardless of model or make) that support the RS-232 connector. Quite a few companies offer them for about £15, but you could make one yourself for a lot less than this and without too much trouble.

All you need are two 25-pin connectors (of appropriate gender) and a length of cable containing at least three separate lines.Now just solder up the three lines as shown in the diagram below. Note that two of the lines actually cross (pin 2 on connector A goes to pin 3 on connector B and pin 3 on connector A goes to pin 2 on connector B).



During my long travels through the PD libraries, I certainly haven't seen a PD program that will do the job. You could, however, treat yourself to either Butcher II, Pixmate *or* Deluxe PhotoLab, *which are three programs that will do the job rather nicely (we use* Pixmate *and* PhotoLab *extensively ourselves). Contact Precision on 081 330 7166 for* Butcher *and* Pixmate, *and Electronic Arts on 0753 49442 for* PhotoLab.

NEW MODE OF WORKING

Converting a HAM picture to 32 colours with *Pixmate* is simplicity itself. Firstly, load in your HAM picture and then press the right mouse button to bring up the menu strip. Now just enter the 'Color' menu and select the 'HAM to 32' option. After a few seconds, your picture will be converted before your very eyes.

Achieving the same results with *Deluxe PhotoLab* is a bit more involved. Firstly, run the 'Colors' program on your *PhotoLab* program disk and then load in your HAM picture. Next, bring up the menu strip and select 'Sort On –> Population' from the 'Color' menu. This will sort the 16 HAM colour registers according to which are used most. Next, select 'Set To –> 320x256' from the View Modes menu if your HAM picture is non-interlaced, or 'Set To -> 320x512' if your picture should happen to be interlaced.

After checking to make sure that the operation you have selected is really what you want, *PhotoLab* will ask you the sensitivity of the colour reduction algorithm: for best results, you should select 'High'.

MEMORY AND MONITORS

Having recently bought an Amiga 500 and second drive, I've realised that the machine needs at least a megabyte for serious use. I am therefore considering buying a RAM expansion. Looking through the adverts in *Amiga Format*, I have noticed quite a few companies advertising 1.8 Mb internal RAM expansions for the 500.

Firstly, is it safe to use such a high-capacity board with the 500? Is a version with a battery-backed clock worth buying? Finally, do these 1.8 Mb boards bring your machine up to 1.8 Mb total or 2.3 Mb?

My second problem concerns monitors. There seem to be so many different types on the market, all offering different features. What are the differences between the Phillips CM8833 and the CM8852? Is the CM8852 capable of accepting stereo input from the Amiga? Which monitor do you recommend?

S Lawson
Ulverston, Cumbria

Don't worry, the extra large RAM boards are perfectly safe and will do no harm to your machine. A battery-backed-up clock can be very handy but you'll probably stop using it once the initial novelty has worn off. As for the RAM board's capacity, a 1.8 Mb board should knock your memory up to 2.3 Mb.

The difference between the CM8833 and the 8852 is that the latter provides a higher display resolution than the 8833. If you can afford the extra cash, then go for the 8852 in preference to the 8833. The 8852 is indeed stereo.

We in the Amiga Format *offices have a combination of different monitors. The Amiga 500s use the 1084D and the mono (mono sound, not monochrome) 1084 respectively, while our Amiga 2000 uses a very posh Taxan 770 multi-sync monitor. If you can afford it (the cheapest multi-sync is about double the price of a 1084!), a multi-sync is worth buying just so that you can take advantage of the new ECS screen modes (when the ECS is finally released). If you can't afford a multi-sync, then the CM8852 is a very good second choice. Look out for a monitor round-up in a future issue of* Amiga Format.

COLOURFUL CRASHES

Many of you will have noticed that when the Amiga is first turned on, the screen cycles through shades of grey before the 'Insert Workbench' prompt finally appears and the Caps Lock light flashes. This rather strange process is called a 'self-diagnostic' and is basically the Amiga testing all its various bits and pieces to make sure they are all working. Owners of the A1000 (if there are any out there!) even have an extra diagnostic when the machine is first turned on: the computer actually plays a little tune before booting Kickstart from disk!

If your computer is OK, the sequence of colours will be dark grey, light grey, white and then the 'Insert Workbench' prompt appears. If something goes wrong, the screen will turn to a certain colour to indicate a particular fault. Here's a brief run-down of what the colours are and what they actually mean:

Green – Chip RAM failure
Yellow – 68000 trapped before Guru initialised
Blue – Error in PAD (custom chip error)
Red – ROM failure

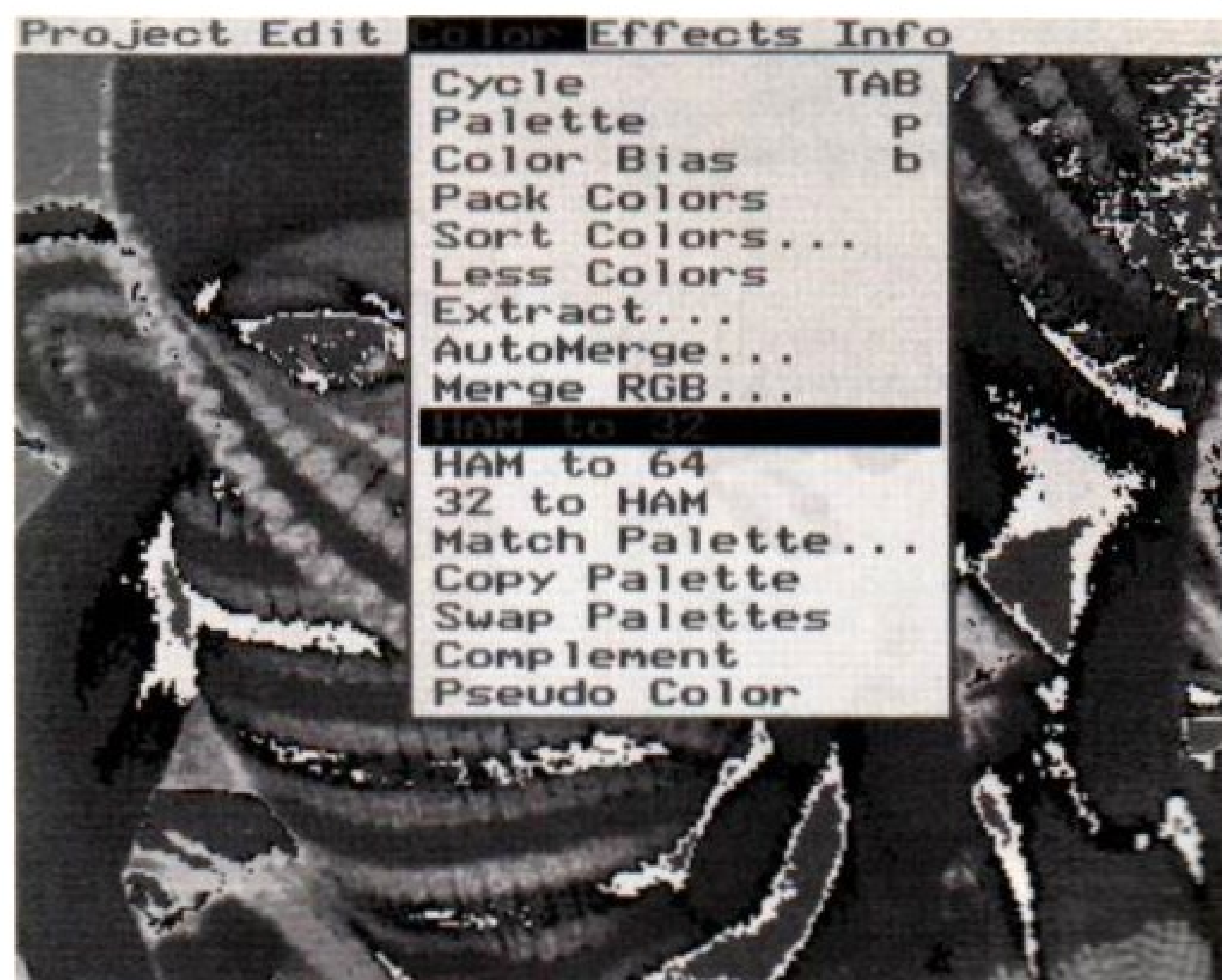
Patrick Downes,
Pontypridd, S Wales

MY MONITOR'S A TELLY!

So you've got yourself an Amiga, a monitor and a video recorder; how would you like a free TV thrown in into the bargain? Read on!

All you'll need to display pictures from the video on your monitor is a pair of leads with phono connectors on one end. On the other end of the leads you will need to have the appropriate connectors to plug in to the 'Video Out' and 'Audio Out' sockets on your VCR.

First of all, connect a lead between the video out and the 'CVBS/L' connector on your 1084 monitor. Then connect the VCR's audio out to the connector labelled 'Audio' on the monitor. Once every-



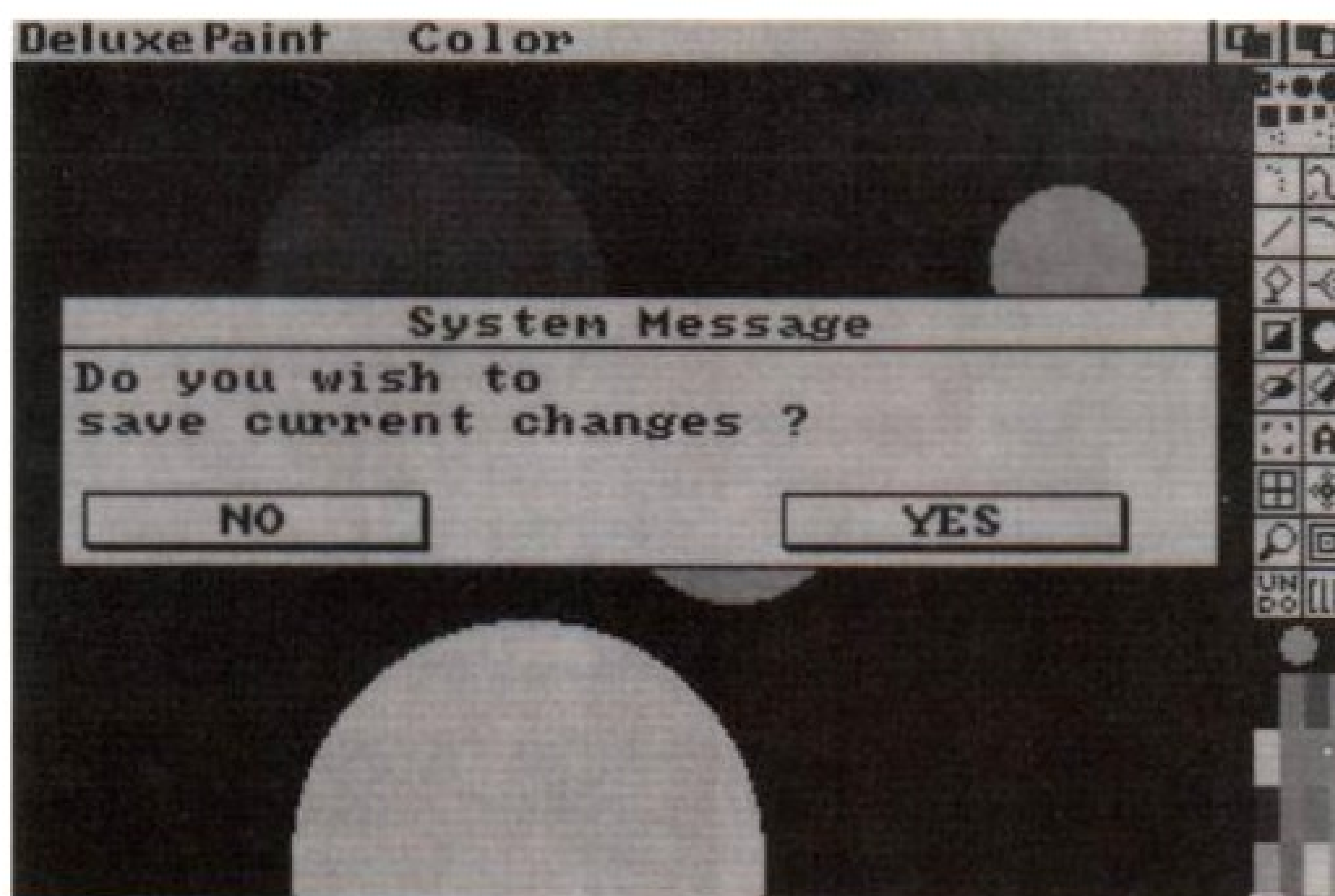
But exactly how do *Pixmate* and *Photolab* work? See 'New Mode...'

thing is connected up simply pull don the front panel on the monitor and press in the little button labelled 'CVBS/RGB'.

Now when you play a tape on your VCR, the picture will be displayed on your Amiga monitor. If the video display seems to become corrupt when you turn on the Amiga, try unplugging the SCART lead that connects the Amiga to the monitor.

If you also have an aerial lead connected to the VCR, while a tape is not running you'll be able to watch live telly prohrams on your monitor – but remember, you will need to pay your licence fee!

O Abbott
Bristol



Having trouble NOT quitting from *Deluxe Paint*? See 'I Quit!'

I QUIT!

Unlike most packages, when you select the QUIT option in *DPaint*, the program will not give you the option of cancelling the operation. However, if you have made changes to your art since it was last saved, then *DPaint* will give the option of saving your artwork before exiting. But what do you do if you accidentally select Quit and want to get back to *DPaint?*

Although DPaint doesn't actually have a Cancel Quit option, there is a way around this. When you select Quit, *DPaint* will display a requester allowing you either to drop straight out, or to save your work and then quit. If you select Save, *DPaint* will display a file requester. Now just select 'Cancel' on the file requester and the entire quit operation will be aborted.

J Taylor
Gainsborough, Humberside

FREE RANGE KEYBOARD

Amiga 2000 owners! Rather than be limited by the length of your keyboard cable, type at any range with this simple tip!

A2000 and B2000 keyboards are connected to the machine by a standard five-ipn DIN connector. So all you need to do is pop down the local shop and buy any standard audio or video lead that is as long as you want and has a male five-pin DIN on one end and a female five-pin DIN plug on the other end – and plug that in instead. Simple, eh?

IMAGINE MY SURPRISE!

Are you having problems removing labels from your disks? Do they tear, leaving a almost unremoveable layer of paper and glue? You need a hot water bottle, matey!

Seriously, though. If you have problems removing disk labels, try laying the disk on a table (label side up) and then place a steaming hot water bottle on top of it for about 30 seconds. After that time, you should be able to easily peel the label off with your fingers.

P Sims
Victoria, Australia

FREE VIRUS KILLER!

You may not know it yet, but you may already have a free virus killer! Yes, if you own Workbench 1.3, hidden away somewhere is a freebie virus checker and killer!

It isn't really surprising that you haven't already found this little gem because the manual writers at Commodore seem to have done their best to hide it by using the smallest possible font size that their typesetter could manage.

The virus killer is actually built in to the CLI 'install' command, the command that is used to construct bootblocks on floppy disks. To use it, you must first enter the CLI and then just type INSTALL DFO: CHECK.

The 'check' option tells AmigaDOS to compare the bootblock of the disk that is currently in the internal drive with a standard, 'clean' bootblock. If the disk's bootblock appears suspect, then Install will return 'MAY NOT BE STANDARD V1.2/V1.3 BOOTBLOCK'. Otherwise it will return 'APPEARS TO BE STANDARD V1.2/V1.3' if everything seems to be clean and healthy.

If Install thinks that the bootblock is suspect, all you have to do is type 'INSTALL DFO:' and the potential virus will be sent to live on the great floppy disk in the sky.

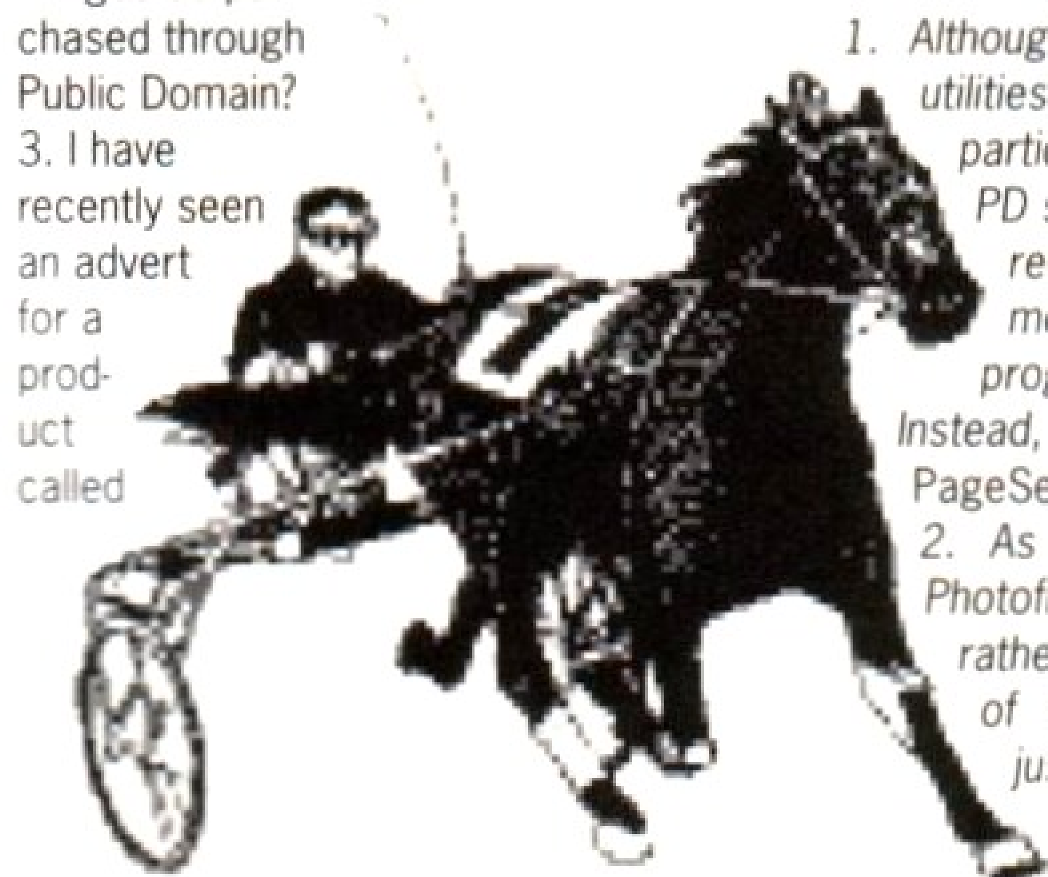
C Cannon
Romford, Essex

A WHOLE HOST OF QUESTIONS

I am relatively new to the Amiga scene (three months) and so far I have purchased two packages, *Photon Paint* and *Publisher's Choice*. I have collected together a few questions that I hope you can answer:

1. Is there a Public Domain program which will print out disk labels?
2. Where can I buy a cheap collection of clip art images to be used with *PageSetter 1.2* (included as part of the *Publisher's Choice* package), and can any of these images be purchased through Public Domain?
3. I have recently seen an advert for a product called *Zuma Fonts:* please could you tell me precisely what this is, and whether it will work with *PageSetter?*
4. Please, from your own experiences, which are the most reliable public domain companies?
5. I am considering entering the world of MIDI and therefore I need a package which is easy to use, yet versatile. Are there any you could recommend that are under eighty pounds?

B Willcocks
Bournemouth



1. Although PD disk label utilities exist, none are particular good (any PD suppliers can correct me by sending me a copy of the program in question). Instead, why not use PageSetter?
2. As it 'appens guv, Photofile *produce a rather nice collection of seven disks for just £35. Give them a bell on 0602 261498.*
3. Zuma Fonts *is actually a collection of fonts for use within any package that will accept standard Amiga fonts (such as those on your Workbench disk). A better bet would be to contact your local PD supplier who is bound to have a large collection of PD fonts.*
4. Put me on the spot, would you? Any PD companies that advertise with Amiga Format *will be more than capable of helping you out.*
5. The best Amiga MIDI package is Microlllusions' Music X *that we reviewed in Issue 3 of AF. Unfortunately,* Music X *will set you back £225. However, those nice chaps at Microlllusions have produced a cut-down version called* Music X Jnr*, whic sells for the bargain basement price of only £99. "That's still not under £80 though, matey!", I hear you shout. Well, check out our Mail Order pages (Pages 190-191) and you might find* Music X Jnr *for the amazing price of only £73.95!!! (a saving of over £25!) Plug ends.*



Improve your documents with some Clip Art.

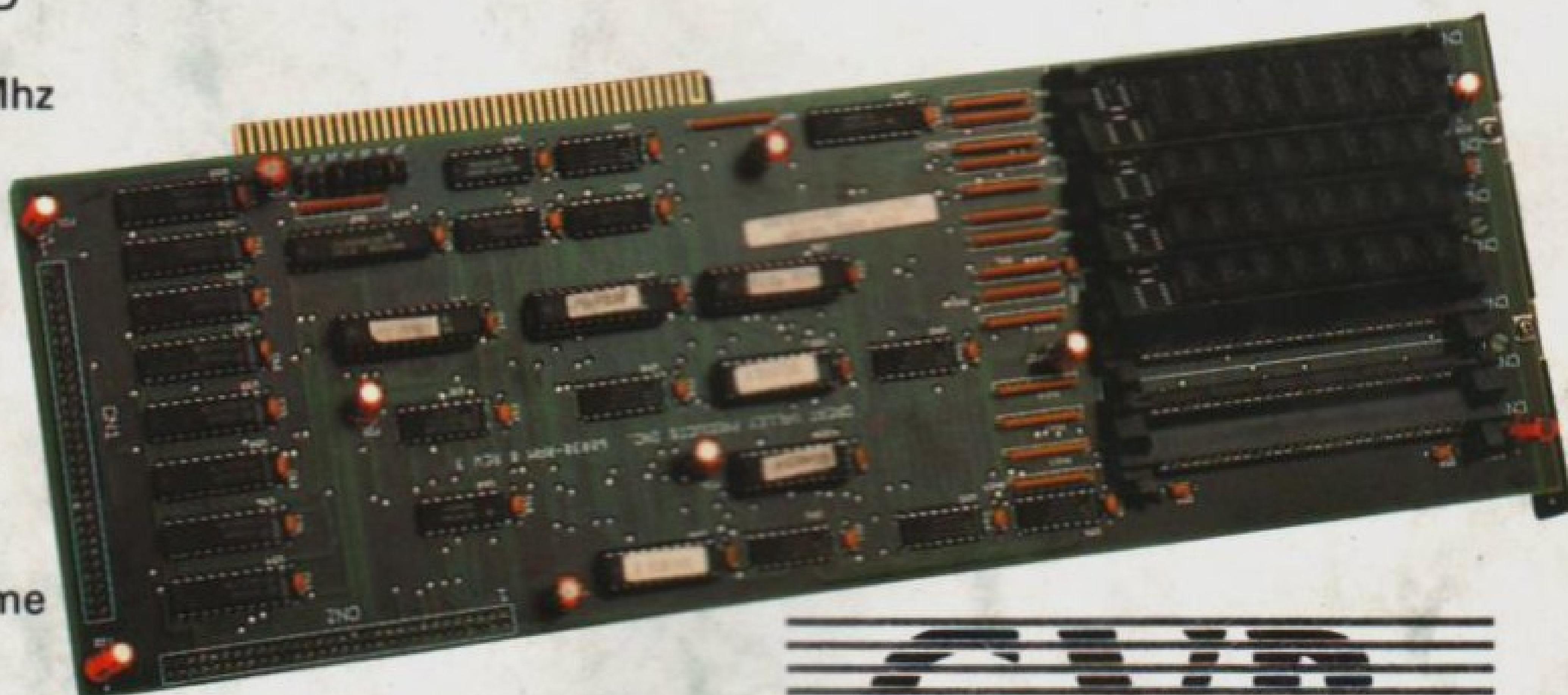
POWER COMPUTING

THE AMIGA 2000 SPECIALISTS

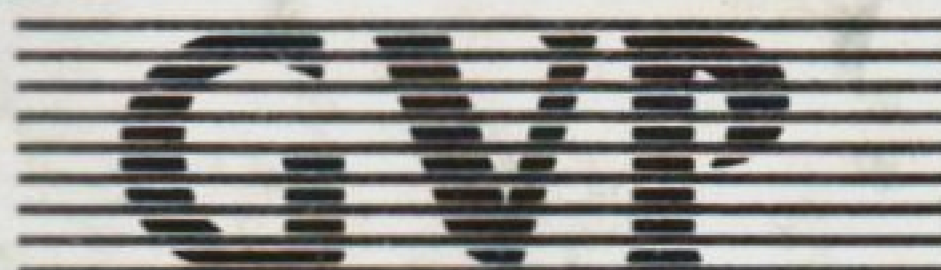
UK SOLE DISTRIBUTOR FOR GVP

6 8 0 3 0
ACCELERATOR BOARD

Up to 33 Mhz

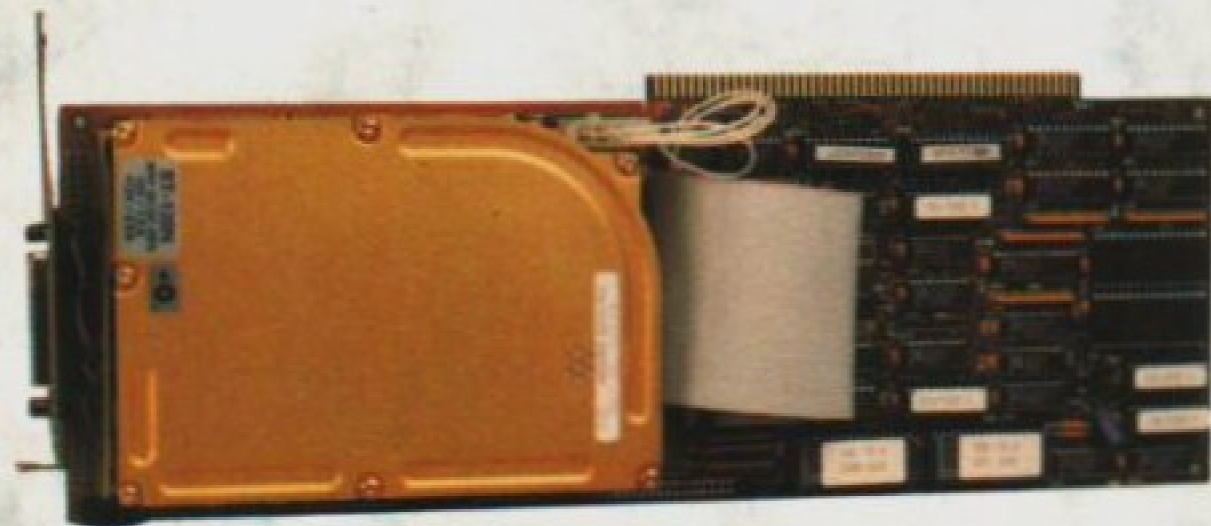


- 16 Mhz, 28 Mhz, 33 Mhz
- Expandable to 8 MB
- Easy to install
- 12 month warranty
- Selectable 68000 fall back mode for full floppy based game compatibility
- 68030 design allows high clock rates and Genlock compatibility



GREAT VALLEY PRODUCTS INC.

HARD DISK CARD



- Available in a range of sizes
- 2 MB of fast ram expansion using easy to install, state-of-the-art SIMMS
- External SCSI connector for attaching additional external SCSI devices
- Easy to install
- 12 month warranty

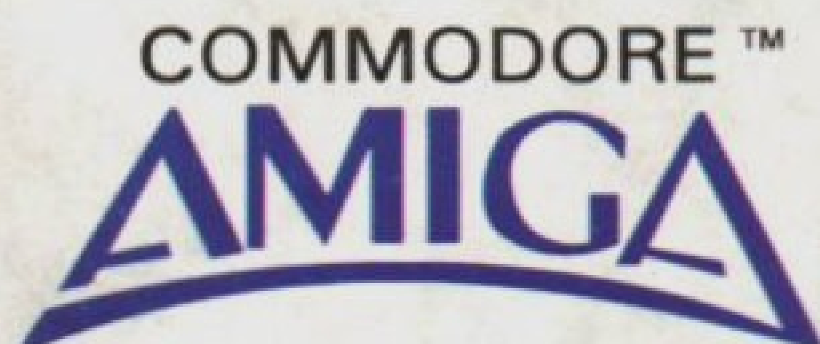
8 MB EXPANSION BOARD & SCSI HARD DISK CONTROLLER



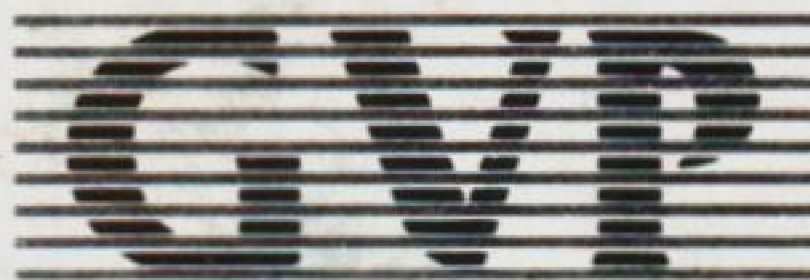
- Up to 8 MB ram using 1 MB x 8 SIMMS modules
- Supports 6 MB fast ram expansion for PC Bridgeboard users
- Includes flat 50-pin ribbon cable for connecting internal SCSI Hard Drive
- Easy to install
- 12 month warranty

Other GVP products include

SCSI CARD
HARD CARD
TAPESTORE - 150 MB Tape Streamer
SYQUEST 44 MB - Removable Hard Disk



PHONE
0234 273000
FOR YOUR BEST DEALS!
Dealer Enquiries 0234 273248



All trade marks acknowledged

Power Computing Ltd • 44A Stanley Street • Bedford • MK41 7RW
Tel 0234 273000 Fax 0234 270133
Technical Support 0234 273248 Mon-Fri 3 - 5 pm
Showroom & Telephone Sales open Mon-Sat 9·30 am – 6·00 pm and to 8 pm Thursdays & Fridays

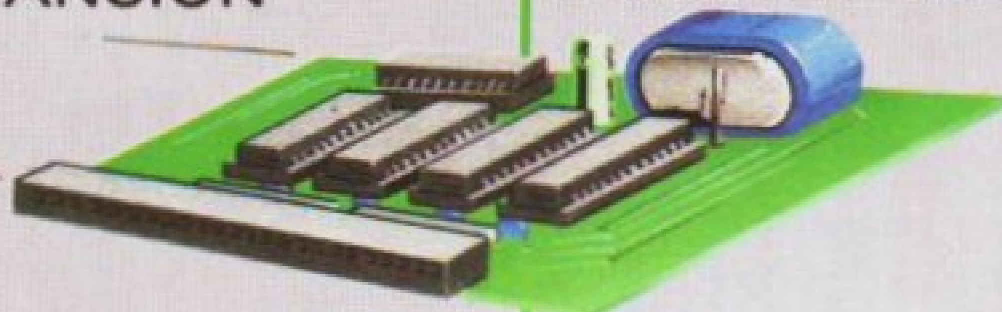
PC POWER CO

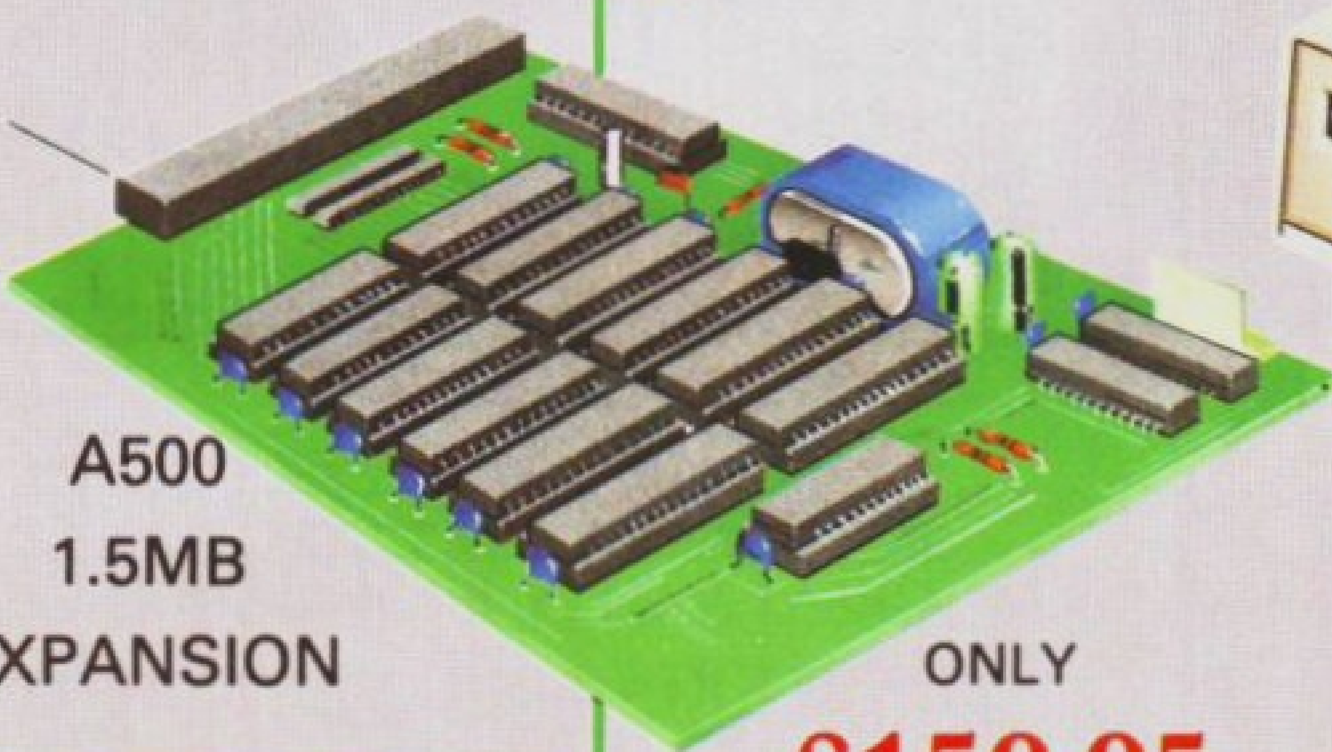
ALL PRICES ON THESE PAGES INCLUDE VAT AND DELIVERY

A selection of special deals only av

A500
512K
EXPANSION

ONLY
£59
INC. VAT
INCLUDING
BATTERY BACKED CLOCK





A500
1.5MB
EXPANSION

ONLY
£159·95
INC. VAT
INCLUDING
BATTERY BACKED CLOCK

A500 Expansion ram PC501/PC502

- A500 Expansion Ram using low power 1 Mb chips
- Two Models available 512K/1.5MB
- Complete with clock and lithium battery
- Fits in A500 expansion underneath computer
- Comes complete with extra ram switch off software
- 1.5MB model **only** requires simple cable to be fitted inside Amiga
- 12 month warranty

NOW ANTI CLICK!

A500 Internal Drive Kit
£59·00



ONLY
£69·95
INC. VAT
Power Drive PC880

- Now with anti-click that stops that annoying drive click when no disk are present!
- Fully compatible with A500, 880K formatted
- Isolating on-off switch
- Through port for daisy chaining
- Colour matched and styled to Amiga
- Free utility diskette
- 12 month warranty

40 Disks* and lockable storage box
£29·95
INC. VAT



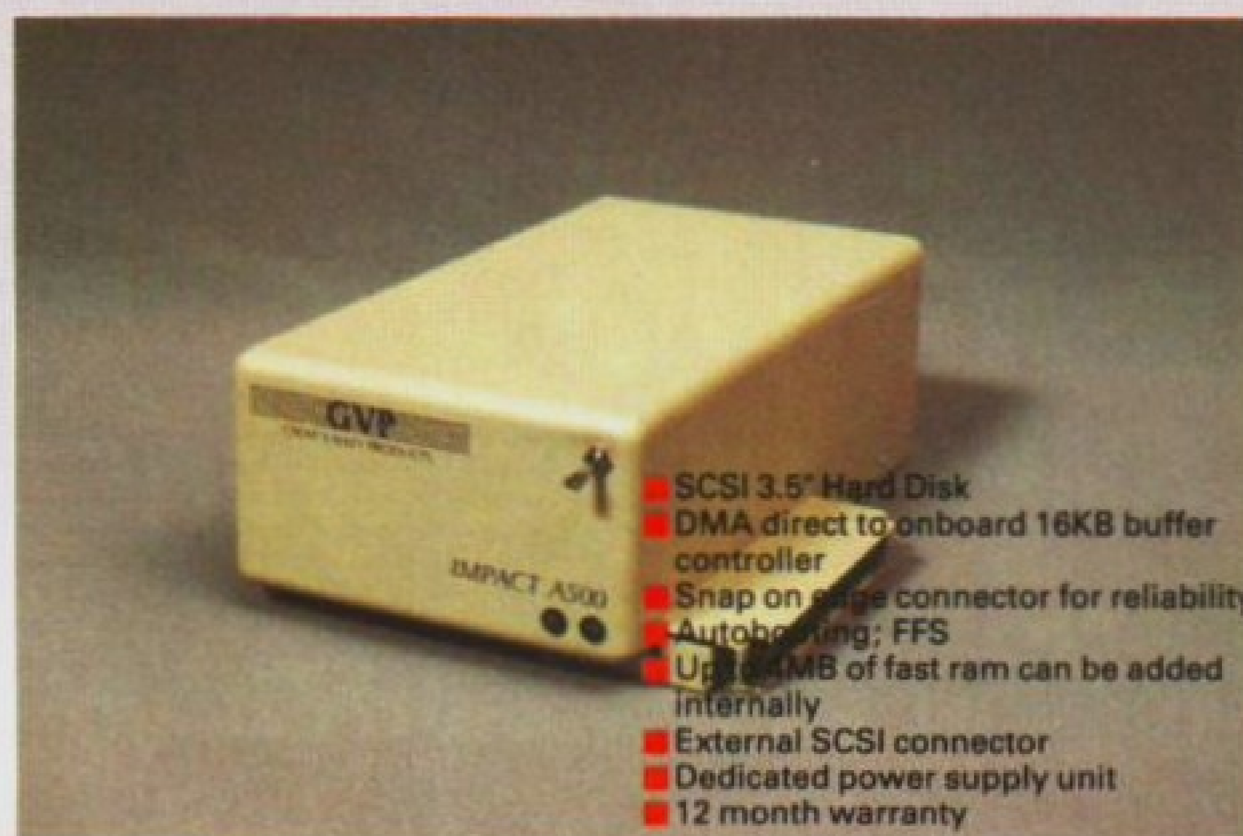
15 Disks* and Storage Box
£9·95
INC. VAT

Verbatim media - fully certified and guaranteed for life!

GVP

GVP IMPACT
A500 Hard drive

Now using SIMMS for a massive 4MB extra ram!



	0K	2MB	4MB
45MB	£599.00	£749.00	£899.00
80MB	£849.00	£999.00	£1149.00
100MB	£999.00	£1149.00	£1299.00

BUY YOUR A500 SYSTEM FROM POWER AND GET A GREAT DEAL MORE!



BASIC PACK	as above	£399
SUPER PACK	with PC880 drive	£459
ULTRA PACK	with PC880 + 512K	£499
MEGA PACK	with PC880 + 1.5MB	£599
HYPER PACK	as Mega with A590 Hard Dr.	£949

Class of the 90's and other packs available
Commodore A590 20MB Hard Disk £379

MPUTING

able from Power House DIRECT!

GO COLOUR AMIGO!

Star LC10 Colour Complete Kit
£219·00
INC. VAT

Includes
- LC10 Colour UK Model
- Parallel Cable
- 200 sheets microperf paper
- 200 address labels
- LC10 colour WB driver
- Delivery and vat

LC10 Colour Fabric printing kit



£24·95



Star LC10 Colour	£219
Star XB10-24 Colour	£499
HP Paintjet Colour	£799
HP Paintjet XL A3 Colour	£2500

Amiga Music System (MM5000 + Pro Sound Gold) £99



Video Magic + P.A.S.E. Animation Program £49

- Multi media presentation system
- Supports all IFF picture files
- Supports P.A.S.E. Animations
- Auto scripting
- Sound effects by using Prosound Designer
- Controllable from joystick Port 2
- Many more features

Full details available

VIDTECH SCANLOCK £899





All trade marks acknowledged

The One Stop Software Shop! Callers Welcome!



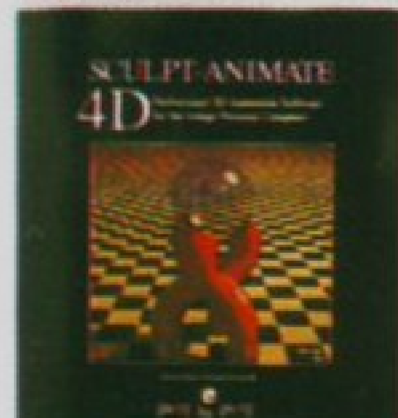
Power Computing are the productivity software specialists. Scores of new titles every week! The following is a selection from our large range. We also stock most of the published Amiga books and magazines.

RED HOT PRICES

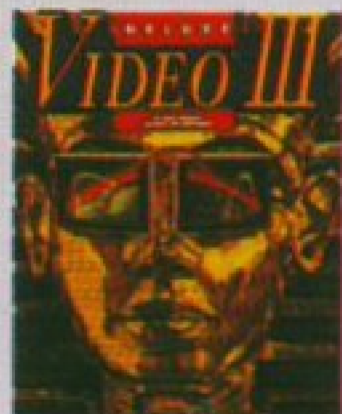
ART & GRAPHICS

Typically 30-40% off rrp

Animagic	£69
Amiga Clipart	£29
Comic Setter	£37.95
Deluxe Paint 3	£59
Deluxe Photolab	£48
Deluxe Video 3	£79
Digipaint 3	£49
Digiview Gold 4	£109.95



Elan Performer	£39
Express Paint 3	£69
Fantavision	£29.95
Interchange	£49
Interfont	£79
Intro Cad	£39
Kara Screen Fonts 1	£49
Kara Screen Fonts 2	£49
Movie Setter	£48
Photon Paint 2	£79.95
Pixmate	£35



Pro Video Plus PAL	£169
Sculpt 3D XL	£99
Sculpt 4D Junior	£149
Sculpt 4D	£329
Turbo Silver	£99
Video Magic + P.A.S.E.	£49
Video Page	£99
XCAD Designer	£87.95
XCAD Pro	£325

WORD PROCESSING, DTP & BUSINESS

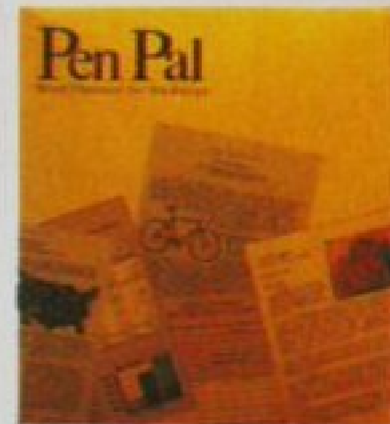
Excellence	£159.95
Home Accounts	£24.95
Kind Words	£39
Maxiplan +	£99
Maxiplan 500	£79
Pagestream	£120
Pro Draw	£100
Pro Page 1.3	£179
Pro Page Templates	£39
Pro Text	£74.99
Pen Pal	£99
Superbase 2	£62
Superbase Pro	£160
Superplan	£62
The Works Platinum	£149
Word Perfect	£164

LANGUAGES ETC

Devpac Amiga	£45
Hisoft Basic	£55
Lattice C v5	£160
Lattice C++	£299
Manx C Dev	£163
Manx Debugger	£49
Power Windows 2.5	£48

UTILITIES

Arexx	£39
BAD	£35
BBC Emulator	£39
CLImate	£20
Dos 2 Dos	£29
Cross Dos	£29
Fine Print	£39
Quarterback	£34
Transformer	£29
WB 1.3	£15



MUSIC

Midi Interface	£25
C64 Music Keyboard Interface	£49
MM5000 Keyboard	£55
Dr T's Drums	£25
Dr T's Midi Studio	£49
KCS level 2	£229
Music X	£199
Pro Sound Gold	**£39**
Amiga Music System	£99
Sonix	£45

Need Help?
Power Technical Helpline Mon-Fri 3pm-5pm 0234-273248 Customers only!
For sales information call our sales lines! All prices are subject to change
Availability on most items is excellent due to large stocks. Please call first to avoid disappointment

POWER HOUSE DIRECT
GVP
NATIONAL DISTRIBUTOR

Power House, the direct sales arm of Power Computing Ltd — Leaders in peripherals & software — is the natural choice for the Amiga enthusiast. Highly competitive prices, a wide choice, fast computerised service and the backing of a £2M + 5 year old company are just some of the reasons for tele-shopping at Power. Large stocks, friendly reception and "if it don't work we give you a new one" are a few more!



"The Extensive Power House Bedford Showroom" open Monday to Saturday 9.30am - 6.00pm Thursday & Friday 7.00pm

Power Computing Ltd, Power House, 44A Stanley Street, Bedford MK41 7RW

Orders Only 0800 581742 Free Call
General Enquiries & Orders 0234 273000 (5 lines)

Name

Address

Postcode

Telephone

System owned

Credit Card no.

Expiry date

Signature

I would like to order

Make cheques payable to Power Computing Ltd

I enclose a cheque / PO for
£

AF

Coping With Failure!

By very special request, we bring you the complete guide to error codes, first printed in two parts in Issues Seven and Eight.

Every now and then, something goes wrong during a disk operation. From the Workbench the Amiga will display an error number and a short description of what went wrong along the Workbench menu script. If you're a CLI dabbler, this error report will be written straight into the CLI window that the task was launched from.

Anyway, to make things a bit clearer, here's a run-down in plain English of what those error codes actually mean.

103 insufficient free store

This error occurs when you try to load a program that requires more memory than is presently available. Try shutting down any tasks that are currently running and close down any windows that aren't needed.

105 task table full

You're really pushing the Amiga if you manage to get this error. The Amiga can only manage 20 CLI's at any one time. As soon as you try opening any more, AmigaDOS will complain bitterly and refuse to open any further CLIs.

120 argument line invalid or too long

This error appears if a program is unable to make sense of the parameters you have passed to it.

121 file is not an object module

You've just tried to load a file that is not a program. Only programs can be run by directly entering their name. If a program that should work fails to work, check to make sure it isn't a batch file (or it hasn't become corrupt).

122 invalid resident library during load

Something went wrong when the program you have loaded tried to open or load a system library.

202 object in use

To prevent one program from modifying a file that another program is using, AmigaDOS automatically locks the file out of reach of other tasks until the file has been closed by the program that is using it. If you get this error, another task that you are running is using the file.

203 object already exists

You've just tried to copy (or rename) a file to a filename that already exists. If you get this error during a copy operaion, then the file that has the same filename as you've tried to use is protected against modification (use the AmigaDOS 'protect' command to unprotect it).

204 directory not found

A program (or CLI command) has tried to access a directory that doesn't as such exist. Check to make sure that you haven't made a typing error. If everything seems OK, check the disk's directory (using DIR) to make sure that the directory does exist.

205 object not found

Very similar to error 204, except that this error applies to both files and directories. Check as above.

206 invalid window description

A program attempted to either open a window that was too big for the maximum display size (depending on the screen resolution) or by passing window parameters in an incorrect format.

209 packet request type unknown

If you get this error, then you've got problems – because there's not a great deal you can do about it. This error only occurs because of programming errors (bugs).

211 invalid object lock

Another programming error. A program created an invalid object lock code (just let programmers worry about such things!)

212 object not of required type

This error usually occurs when you accidently mistake a file for a directory (or vice-versa). For example, if you try to load a directory into a text editor, or you try to copy multiple files to a file (when it should have been a directory).

213 disk not validated

The disk that AmigaDOS is trying to access has become corrupt, and the Amiga is unable to either load its disk validator (found in the Workbench 'L' directory) or validation failed altogether. Try using the DiskDoctor program from the CLI.

214 disk write-protected

AmigaDOS tried to alter the disk but was unable to do so because the disk is write protected. No prizes for guessing what you've got to do to solve this one!

219 seek failure

Another programmer problem this. The program that caused the error paused incorrect parameters to the AmigaDOS Seek() function. Contact the manufacturer and tell them about it immediately!

220 comment too big

My, don't we waffle on! The filenote that you have tried to attach to a file is greater than 80 characters long. The solution to this problem is, like most, beautifully simple – just cut down the size of your filenote.

221 disk full

The disk (Hard or floppy) that you are trying to write to has run out of disk space. If you get this error when trying to copy files to the RAM disk, then you've run out of memory.

222 file is protected from deletion

Files can be protected against deletion by setting the relevant flag using the AmigaDOS Protect command. To make the file deletable, enter Protect <Filename> D and then delete the file using the AmigaDOS Delete command.

223 file is write protected
224 file is read protected

If you get either of these error messages, then I'll be very impressed – because they shouldn't appear in the current release of Kickstart. These two error messages are put in for 'future expansion'.

225 not a valid DOS disk

This disk you have just tried to access is either totally corrupted, or it hasn't been formatted (or it's not an Amiga disk at all – are you sure it doesn't belong to your Mac, PC or ST?).

226 no disk in drive

There isn't a disk in the drive that the Amiga can access. Put one in and the Amiga will love you.

232 no more entries in directory

No, you haven't tried to write more files to a disk than AmigaDOS can handle (that's practically impossible!). This error is actually caused by a bug in the program you are trying to use.

• And that, as they say, is your lot.

WRITE FOR WORKBENCH!

We need your words and your ideas! You can earn money, too – every month the author of the best tip printed wins fifty quid for his or her troubles. If you're a whizz at a particular package and could pass on your experience, get writing! If you've learnt any handy shortcuts or can navigate around AmigaDOS with your eyes shut, then tell us how! Write to WORKBENCH at the usual address – 30 Monmouth Street, Bath BA1 2AP.

THREE COPIES OF MUSIC X WORTH £600 ARE UP FOR GRABS FROM BYTES & PIECES

Music X has been universally acclaimed as the best music program currently available for the Amiga, but it comes with an impressive price tag too. So what better way to get hold of it than by winning one of the three copies provided by Bytes & Pieces? It's too good an offer to miss!

Once you've got your hands on this marvellous program, produced by Microillusions, you will very soon be able to make the sort of music you heard on the cover cassette and a lot more besides. *Music X* doesn't have any particular favourites – it can turn its bars to rock, acid house, classical, funk, punk – anything you like. All you need is the program and your own creative imagination.

Music X is a sequencer, voice programmer, sampler and MIDI interpreter all rolled into one. Back in Issue Three of *AF* we gave it the first full review in the UK and Jon Bates concluded that "it is the most comprehensive and competent music package for its price that I have seen anywhere." Strong words indeed.

Mad ABOUT Music X

YOUR CHANCE TO WIN THE BEST MUSIC PROGRAM FOR THE AMIGA

Bytes & Pieces are the generous providers of the three *Music Xs* and if you aren't lucky enough to win one of them, it might interest you to know that they've got plenty more - but you'll have to pay for those. Bytes & Pieces are at 37 Cecil Street, Lytham, Lancs FY8 5NN and can be reached on 0253 734218.

HOW TO ENTER

Write the answers to the following three questions and tie-breaker on the back of a postcard or stuck-down envelope and send it to: Music Comp, Amiga Format, 30 Monmouth Street, Bath BA1 2AP. The entries should reach us by July 18th and don't forget to include your name, address and phone number on the postcard.

QUESTIONS

1. What is a crotchet?
a) Half a minim
b) An old man with a bad leg
c) A character in Miami Vice

2. What does PWL stand for?
a) Perfect Waveform Ltd
b) Plonkers With Lambourghinis
c) Pete Waterman Label

3. What football team does violinist Nigel Kennedy support?
a) Aston Villa
b) Fulchester Rovers
c) Accrington Stanley

TIE-BREAKER

In less than 15 words complete one of the following sentences.
"Jive Bunny will go down in the annals of history as..."
or "Kylie and Jason will be best remembered for..."

RULES

Employees of Future Publishing and Bytes & Pieces are not allowed to enter. The judges' decision is final. No correspondence will be entered into. Diminutive Australians and irritating rabbits will be ridiculed mercilessly.





disk EXTRA



Where else can you get a magazine and a disk containing almost 900K of programs for under £3? RICHARD MONTEIRO guides you through the Coverdisk's stunning offerings.

ON YOUR DISK

DAN DARE III
Meet the Mekons and plot with Pierre in Virgin Mastertronic's fabulous playable demo featuring dashing interplanetary space hero Dan Dare. Tally ho, chums!



QUARTET
Sound off with Microdeal's sensational four-track sample sequencer. You ain't heard nothin' yet!

XTRABENCH
Never live in fear of another cluttered Workbench screen. Simply create another, and another, and another...

FORMATUNE
Recreate the music from the Amiga Format cover cassette using your Amiga, MIDI sequencer and MIDI instruments with Jon Bates' MIDI file.

GAME BUSTERS
Four fantastic pokes from Justin Garvanovic to give you the upper hand in *Impossamole, Ninja Spirit, Scramble Spirits* and *Typhoon Thompson*.

INTUITRACKER
Play *Soundtracker* and *Noisetracker* eight-bit digitised stereo music in a friendly multi-tasking manner from Workbench with this superb utility.

SMART ROCKET
Journey into the unknown. Enter the Workbench hack zone. Have *you* the skill and stamina to outsmart the SMART Rocket? No chance!

UP TO £800 UP FOR GRABS!

Think you've got what it takes to write for the *Amiga Format* Coverdisk? Get your programming tools out and prove what you can do, and earn yourself some cash in the process. We're after Workbench hacks, demos, utilities, games, game cheats... You could earn *up to* £800! Turn to Page 124 for details.

BACK UP YOUR COVERDISK IMMEDIATELY!!!

DON'T KNOW HOW? SEE P 124 FAST! ENSURE YOU WRITE-PROTECT YOUR DISK BEFORE USE!

DAN DARE III

PROGRAM: VIRGIN
FILES: DDIII, DDIII.DOC, DAN1, DAN2, DAN3, DAN4, GET_FAST, NEWPAN.DAT

Long-time hero Dan Dare in dastardly Treen death plot – the World's future at stake – desolation, despair. Nonsense, hogwash, piffle, rot – colonel Dan's too daring, too dashing, too devious to be detained by the Treens for long.

Breaking free from the Treen torture table, Dan escapes and hides in a chamber nearby. There he discovers a jet-pack and sets off to explore the vast satellite on which he has been deposited. The ever-brave Colonel encounters an escape shuttle powerful enough to get him back to Earth. But woe is he for the fuel tanks are empty. Undaunted, debonair Dan finds his degree in maths comes in handy for calculating that 50 pounds of high-grade rocket fuel are required to complete the journey home.

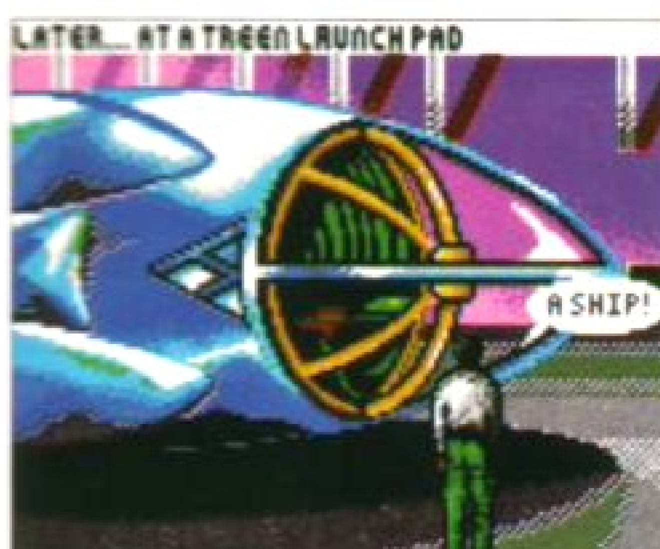
During his forage of the satellite, Dan finds the Mekon's armoury. And from the enormous arsenal chooses a plasma cannon.

The cannon, Dan discovered, has three shot strengths: low, medium and strong. In fact, when switched to strong the cannon unleashes a devastating bolt of energy that knocks Dan back several feet.

Being a bright hobbledehoy, and late-night hacker, Dan can log on to the various terminals dotted around the Mekon vessel and perform all sorts of programming feats. Well, select one of the items he's carrying, actually.

Although brave and rugged, Daniel in not superhuman. He is not indestructible. Contact with the Mekon's malevolent mutants drains Dan's life force. But he has one very powerful weapon that is guaranteed to get him out of any sticky situation: his middle name, MacGregor.

Go make mincemeat of them mutant Mekons, Dan.



Getting Started

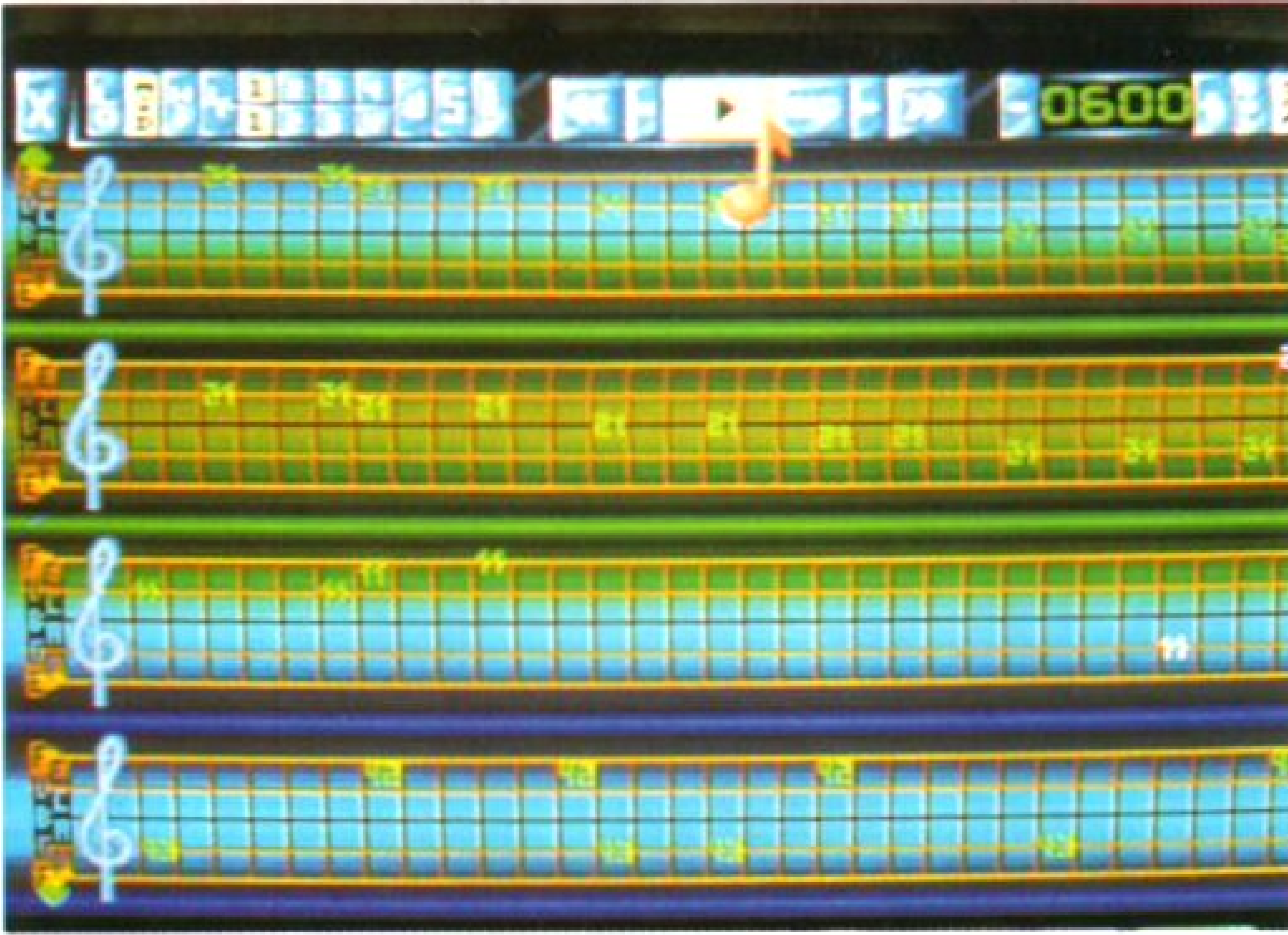
Reset the computer and put the Coverdisk in drive df0:. Click the left mouse button when the scrolling introductory message appears. A prompt will ask whether or not you wish to run *Dan Dare III*. Press Y and hit Return. *Dan Dare* will load.

Plug a joystick into Port 2 and hit the fire button when requested. Use directional joystick movement to control Dan.

The fire button unleashes the laser or currently-active weapon, whichever that may be. The longer you hold down the fire button, the more powerful the bolt of laser energy that vomits forth.

Weaponry and fuel can be collected along the way. There's even a teleport system to take you on your next quest. When near an unusual object try moving the joystick up or down.





The main editing screen is similar to a conventional score, but you don't need to know how to read music to use it.



First stop: file handling screen. From here you can load sample sets and sample sequences.

QUARTET

PROGRAM: MICRODEAL
FILES: QUARTET, QUARTET.DOC, CK, DEMOMUSIC, DEMOSET, GONZO, QUARTETDATA, TITLES

You've read Jason Holborn's rave review of Dan "A Jones" Lennard's sound sample sequencer – now make music with Microdeal's amazing useable demo.

The ability to play high quality sound samples is one of the Amiga's greatest assets. *Quartet* makes four-track composing with such samples extremely easy.

Although the staves follow the Treble Clef convention for pitch, you don't need to be able to read music: pitches are shown at the left-hand edge of each stave and *Quartet* doesn't use those horrible minims and crotchets.

The complete commercial package comes with 100 high-quality samples from Celtic Harp to Syndrum. You can, of course, add your own by using a sampler like AMAS.

Using either the Amiga keyboard or a MIDI instrument you can play the samples polyphonically over three octaves and record live onto any track – all this while *Quartet* plays back the other tracks. This feature is supported in the demo. The program also fully supports MIDI sync START/STOP signals and can thus be part of any MIDI set up.

The numeric keys at the left of the Amiga keyboard each play a sample; you can directly record a drum sequence onto a track just by hitting the appropriate sample keys in the desired rhythm.

You can also compose in the conventional manner by inserting and deleting notes on the staves with the mouse. For maximum flexibility, each note has its own volume, there are extensive Copy/Cut and Paste options, and such facilities as Slides, Loops, and Selective Key Transpose are all fully supported.

Samples themselves can be manipulated in memory by using *Quartet*'s sample editor.

Getting Started

Press F2 from the Coverdisk main menu. If you have a hard drive attached, *Quartet* will reclaim the memory used and reboot the machine. You must press F2 a second time to get *Quartet* to run.

When the disk activity ceases you'll see a file selector showing the files and drawers on disk. Click on the QUARTET drawer. Click on LOAD SET. Click on the file DEMOSET. Click on PROCEED. Click on LOAD MUS. Click on the file DEMOMUSIC or GONZO (Jon Bates' cover cassette composition). Click on Proceed.

You can then hear the 16 individual samples by pressing the numeric keys. Click on the long MUSIC EDITOR icon to go into that

GAMEBUSTERS

Yet more of expert code-cracker Justin Garvanovic's dirty deeds done dirt cheap. Four fabulous pokes to make you invincible in recent smash titles. The pokes can only be run from the Coverdisk pokes menu. Press F5 from the main menu to get to the poke menu.

WARNING: only use the original game disks. None of these hacks write to disk, but play safe and keep all disks write-protected when using them.

IMPOSSAMOLE



Infinite cuddly cult characters in Gremlin's mole and mountains game. Press F1 from the Gamebusters poke menu.

SCRAMBLE SPIRITS



You can only win with infinite lives and credits. Press F3 from the poke menu. Follow all screen prompts thereafter.

NINJA WARRIORS



Infinite throwing stars, credits, time and energy in this oriental beat-em-up. Just hit F2 from the poke menu to get the goods.

TYPHOON THOMPSON



Broderbund's sea and sand spoof gets infinite boats and lives. Hit key F4 to get the bounty. Follow all screen prompts.

YOUR ONE STOP SHOP

MORE SOFTWARE THAN YOU CAN HANDLE!
MORE HARDWARE THAN YOU CAN USE!

Software SUPERSTORE

AMIGA 512K MEMORY EXPANSION

* **Brings your Amiga up to 1 Meg in seconds.**
* **Enable/disable switch. Now you can run ALL software.**
* **Easy to fit - no technical knowledge needed.**
* **Reliable, fast, high quality chips on a robust through plated P.C.B. Do not confuse with cheaper, inferior products.**
* **DOES NOT INVALIDATE GUARANTEE.**

ONLY £49.99 +£2 Postage

ONLY £59.99 +£2 Postage
WITH CLOCK/CALENDAR

The ORIGINAL from Commodore R.R.P. £149.99

AMIGA 1010

EXTERNAL 3.5" DISK DRIVE

Why pay more for immitations when the real thing is this price?

now **Only £59.99**
+£3 Postage

Only while stocks last

WE STOCK MOST DATEL PRODUCTS

New!!

AMIGA MEGAPACK

The **1 Meg** *AMIGA* pack
Exclusive to *Software Superstores*



	R.R.P.
A500 + RAM Upgrade	£479.98
TV MODULATOR	24.99
• BATMAN (THE MOVIE)	24.99
• NEW ZEALAND STORY	24.99
• DELUXE PAINT II	49.99
• INTERCEPTOR	29.99
Galaxy Force	24.99
Fighting Soccer	24.99
SUPER WONDER BOY	24.99
DYNAMITE DUX	24.99
ALTERED BEAST	24.99
Blasteroids	19.99
TEN STAR PACK	229.50
Computer care kit	7.99
10 Blank disks	9.99
Lockable disk box (40)	9.99
Quickjoy II Joystick	8.99
Carriage	**FREE**
TOTAL R.R.P.	£1046.33

OUR PRICE £499.99

Items marked • are in the BATPACK. The new FLIGHT of FANTASY pack is also available for the same price

EVERYTHING you could possibly need for your *AMIGA*

VISA

Access

Licensed Credit Broker

Written details on request for visitors to our shops only.

MAIL ORDER:-
Carriage: Add £5 for next working day

24 HOURS ORDER HOTLINE (0782) 204639
FAX (0782) 202269

POST to Unit 7a Oldham St, Hanley, STOKE on TRENT, ST1 3EY

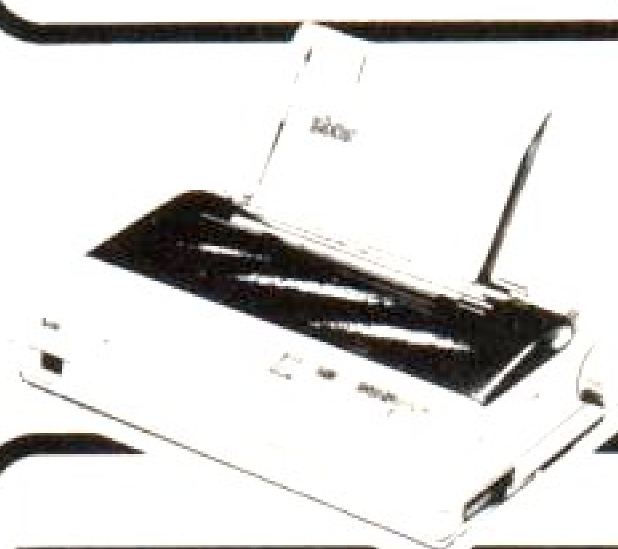
CUMANA *AMIGA* DRIVES

the BEST NAME in Disk Drives

* **Legendary Quality**
* **Great Styling**
* **Total Compatibility**
* **Fully Guaranteed**

NOW Only **£69.99**

Carriage & insurance £2.00



1 YEAR ON-SITE MAINTENANCE ONLY £10 EXTRA ON ANY PRINTER

PRINTERS

STAR LC10

Acclaimed "Best Buy" budget printer. Now massively under-priced at just

£169.99 *OR £8 MONTHLY

STAR LC10 Colour

The perfect printer for every Amiga. Colour output from all the better art packages - or just slot in a black ribbon for word processing. Cheap to run too. Very affordable

£219.99 *OR £9 MONTHLY

STAR LC24 - 10

24 Pin quality at a price you can afford. 8 Fonts, 3 print variations, paper park-ing, 170 CPS draft, 57 CPS LQ

£259.99 *OR £10 MONTHLY

ALL PRINTERS carriage free

STOKE-ON-TRENT
11 Market Square Arcade, Hanley Stoke-on-Trent
Manager: Adrian Tel: 0782 268620 Open 6 Days

SHEFFIELD
6 Waingate, Sheffield
Manager: Tony
Tel: 0742 721906
Open 6 days

ST HELENS
27 Baldwin Street, St Helens
Manager: Adrian
Tel: 0744 27941
Closed Thursday

STOCKPORT
6 Mealhouse Brow, (Off Little Underbank), Stockport. Manager: Ray
Tel: 061 480 2693
Closed Thursday

part of *Quartet*, which is characterised by four staves (one per track) and an option bar along the top of the screen.

Click on the PLAY icon at the top centre of the new screen to hear the demonstration music. Click again to stop playing.

You can move through the music in the buffer by clicking on the icons either side of the play icon. *Quartet* supports 16 samples in blocks of four. Each of the digit pairs on the staves are notes – 21 is a note played in sample 1 of block 2.

With *Quartet* you can record five seconds of sound. First, press the appropriate numeric key to select which sample you want to record in. Then click on the REC icon next to the PLAY icon. The top stave will be illuminated in red. Click on your prefered stave. Recording starts when you start playing a melody on the Amiga keyboard. Tap the top four numeric keys to record a drum sequence. Click on the PLAY icon to hear your recording.

Other demo features:

- When you click on the SET icon in the file handler part of *Quartet*, the window changes to a list of the current 16 samples.
- You can toggle any of *Quartet*'s tracks ON/OFF by clicking with the right mouse button at the left edge of that track's stave. On staves are gold, off ones black.
- At the left of the staves are two green diamonds which represent a vertical marker. If these markers are green, play begins from the start of the music buffer.
- You can turn the Amiga's internal Low Pass Filter on or off, by clicking on the LPF icon.
- Finally, after quitting *Quartet*, hit Return to get to the main menu.

FORMATUNE

PROGRAM: JON BATES
FILES: FORMATUNE.MIDI, FORMATUNE.DOC

You've jived to Jon Bates' jazzy jingles on the *Amiga Format* cover cassette – now recreate the raucous rhythms on your MIDI setup. Assuming you have a MIDI sequencer and at least one MIDI instrument you should be able to manufacture merry melodies on your machine.

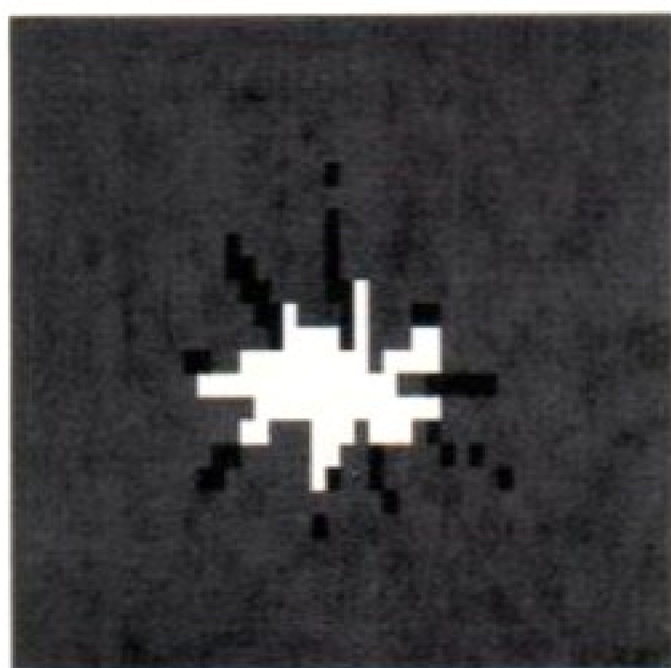
The file FORMATUNE.MIDI in the FORMATUNE folder is a standard MIDI sequence file in MIDI file format. Most sequencers will load this file. The file holds all the data necessary for you to play the cover cassette melody on your MIDI instruments. See Page 24 of Jon Bates' article for more info.

SMART ROCKET

PROGRAM: LARS CLAUSEN
FILES: ROCKET, ROCKET.DOC



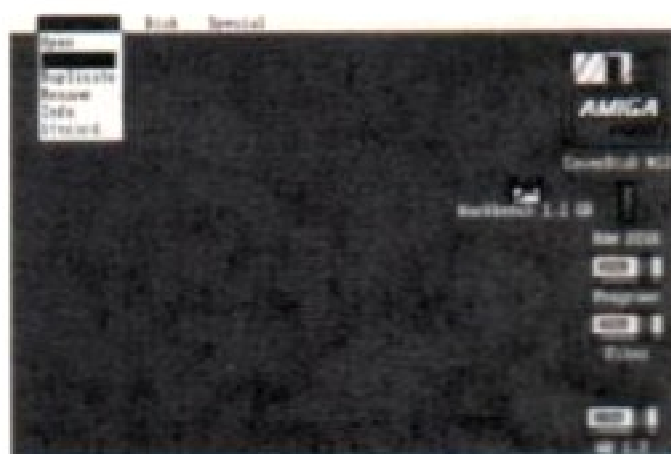
Guaranteed to keep your pointer on the move and you in a panic... it can only mean one thing. The SMART (Seek Mouse and Ravage Techniques) Rocket is about to hit the Workbench. Simply hit F7 from the Coverdisk main menu and don't stop moving to look what's heading your way.



Keep your pointer undercover... here comes the SMART Rocket.

XTRABENCH

PROGRAM: JIM BLACKLER
FILES: XTRABENCH, XTRABENCH.DOC



***XtraBench* in action.**

Irritated by a lack of Workbench space? *Xtrabench* will open a new Workbench for your use.

In fact, this wittly little program will actually open as many Workbenches as you want. Memory permitting, that is. Every Workbench is completely independent from all other Workbenches. A highly convenient way to get extra space.

Getting Started

You must load Workbench before running *Xtrabench*.

Either insert your Workbench disk at the appropriate prompt or hit F10 from the Coverdisk main menu. From Workbench double click on XTRABENCH in the XTRABENCH drawer to call up an additional Workbench.

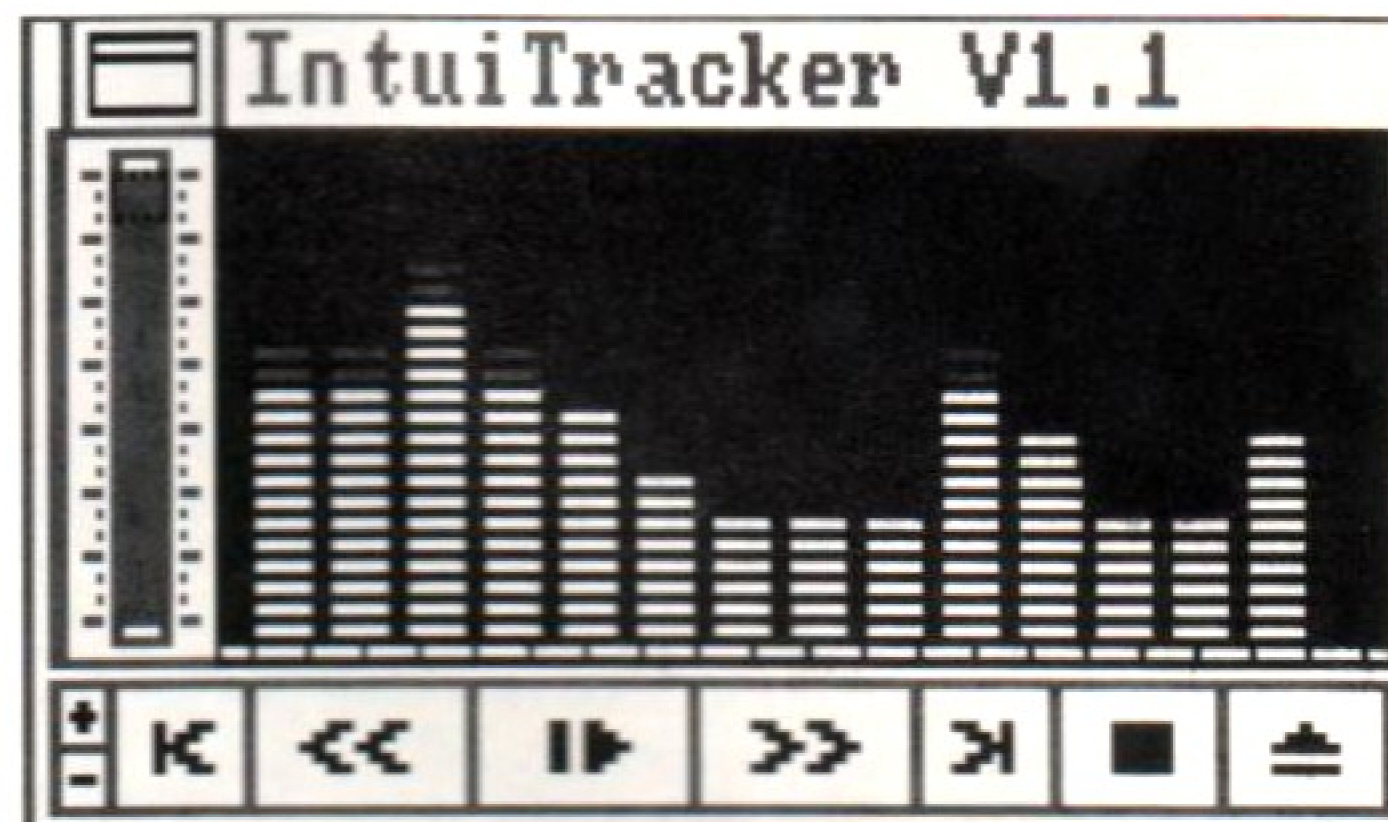
INTUITRACKER

PROGRAM: JAN-IVAR BRUAROY
FILES: INTUITRACKER, INTUITRACKER.DOC



Simply, *IntuiTracker* is a sound track module player. It's an excellent attempt to bring the world of popular *Soundtracker* and *Noisetracker* music into the hands of non-technical Amiga users.

IntuiTracker's sole purpose is to play music of your choice in a multitasking, friendly manner. This gives you the opportunity to listen to your favourite Amiga digitised ditties while doing other things, like programming, writing, painting or downloading. No! You can't use it with *Dan Dare III*.



The control panel offers the following set of gadgets: increase speed of playback, decrease speed of playback, play previous, rewind, play/pause, fast forward, play next, stop, eject.

With *IntuiTracker* you can have your own collections of songs on either floppy or hard disk. Features include:

- Supports Soundtracker 2.0 to 2.5 and Noisetracker 1.0 to 1.1.
- Multi-tasking.
- Control panel for easy control.
- Volume control.
- Graphic equalizer display.
- Programmable play sequence of selected modules.
- Random play of modules.
- Sounds play in background.

Unfortunately, due to lack of space on the disk, there was no room to include any music. Nearly all songs on demos and most games are made using a *Soundtracker* program. There are several *Soundtrack* module-rippers available that will extract these for you. However, most Public Domain demos contain modules in a format *IntuiTracker* can read directly.

Getting Started

Press F3 from the Coverdisk main menu. *IntuiTracker* will load automatically. Alternatively load Workbench and double-click on the INTUITRACKER file in the INTUITRACKER drawer.

Do the following if you wish to play a song through *IntuiTracker*:

1. Find a disk which you know has some *Soundtracker* modules on it. Any *Soundtracker* disk or a music collection disk that's not crunched and is not a non-DOS disk should do nicely.
2. Click on the *IntuiTracker* message at the top of the screen. Click the right mouse button so that the menu bar is highlighted. Move the mouse pointer over the Tracks heading while still holding the right mouse button. Click on Choose Disc.
3. Delete the default text and enter the name of the disk directory where the module is located. For instance, DFO:.
4. Examine the Tracks menu once the drive stops whirring. If a module name has appeared, select it. If no names appear, don't panic. Do this: select MOD.files ONLY from the Prefs menu. Repeat step 2, 3 and 4 again.
5. The song should now loaded and play.
6. You can select Equalizer and Control Panel in the Prefs menu for some interesting effects.

That should get you going. For a fuller description of all menu items read the extensive documentation supplied on the disk.

USING YOUR FORMAT DISK

IMPORTANT! Before using your *Amiga Format* disk, you should make a back-up of the master disk as soon as possible.

BACKING UP YOUR DISK

For many reasons, it is important to make a backup of the Coverdisk as soon as possible. Copying the disk may sound like a complicated task suitable for techno-buffs only, but it is surprisingly simple provided you read the following instructions carefully:

1. First, turn on your machine and load Workbench. Once the Workbench screen appears and the disk-drive light goes out, remove your Workbench disk and insert our Coverdisk.

2. Next, click once on the Coverdisk icon and then press the right mouse-button and the Workbench menus will appear. Now, while keeping the right mouse-button depressed, move the mouse pointer over to the 'Workbench' heading and a menu will drop down. Move the mouse pointer over the 'duplicate' menu option and then press the left mouse-button.

3. After a few seconds' disk access, the Workbench DiskCopy tool will be loaded and run. Now just follow the on-screen prompts and your *Amiga Format* Coverdisk will be copied to a backup disk. When the machine asks for the destination, insert your blank disk into the drive. Further instructions are in the user's guide that comes with your Amiga.

USING THE PROGRAMS

All programs on the *Amiga Format* disk are specially set up to make them as easy to use as possible. If you can use the Amiga's Workbench then you can use our Coverdisk! If you do have problems with a program, full instructions on loading and using the programs are included in Disk Extra and these should get you up and running. If you still have problems, you should read the documentation file (.DOC) that is included with every program. To run any of the programs on this month's Coverdisk, follow a simple procedure: unless specified differently within Disk Extra, just double-click on the program's icon on the Workbench and it will load and run. Full details on how to use the programs once they have loaded are included as a documentation (text) file with the program.

To display a documentation file, just double-click on the appropriate .DOC file and a window will open containing the file's contents. Pressing the space bar will advance the text a page at a time.

COPYRIGHT NOTICE

DISK EXTRA HOTLINE

0225 765086
Between 2pm and 6pm on weekdays only

Flummoxed by files? Dumfounded by disks? Paranoid about programs? If you have a problem with the disk – and you're sure the disk is in full working order – phone 0225 765086 with your query. State the model of your machine and anything you've got attached to (or plugged inside) the computer. For problems with disks before Issue 5 phone *Amiga Format* on 0225 442244.

EARN UP TO £800

Name ....
....
Address ....
....
....
Telephone *(Daytime)* ....
(Evenings) ....
My program name is ....
....

Approximate total size of files in kilobytes ....**K**
(we cannot use programs longer than 200K; shorter submissions, under 100K, stand the best chance of publication). It is a:

- ☐ Game
- ☐ Technical tool
- ☐ Business utility
- ☐ Art program
- ☐ Music program
- ☐ Educational
- ☐ Novelty
- ☐ Other

Brief description ....
....
....
....

Checklist **(please tick):**
- ☐ Stamped, addressed envelope for return
- ☐ README.DOC explanation file on disk
- ☐ Printout of README.DOC file (if possible)
- ☐ Name, address, machine type written on label
- ☐ Disk certified virus free

IMPORTANT Please sign this declaration:
This program is submitted for publication by *Amiga Format*. It is wholly my own work and I agree to indemnify Future Publishing against any possible legal action should copyright problems arise.

Signed ....
Date ....

IS YOUR DISK FAULTY?

We have done our best to check that the programs on the *Amiga Format* Coverdisk are simple to use, error-free and have no known viruses. However, we cannot normally answer telephone queries on using the software, and we do not accept liability for any consequences of using the programs on the disk.

If your *Amiga Format* disk is faulty – and out of the tens of thousands duplicated, some are unfortunately bound to be – you should send it back for a free replacement within a month of the cover date to:

Amiga Format
July Disk
Future Publishing
30 Monmouth Street,
Bath BA1 2AP.

If your Amiga refuses to accept the disk, try using the DISK-DOCTOR utility on your Workbench disk to rescue it before sending it off for a replacement. Full details of *DiskDoctor* can be found in the user's manual that came with your machine.

WARNING!

The game cheats on this month's Coverdisk are straightforward to use, but please read the instructions in the magazine and on the disk. Always keep original game disks write-protected. Future Publishing cannot accept responsibility for damage caused to any disks or data damaged while using the Gambusters hacks.

WE WANT YOUR PROGRAM!

If you've got any programs for the Amiga which you think other readers would find useful, interesting or amusing, we'd very much like to know about them.

1. Make sure your program is foolproof to use. 2. Create a file called README.DOC on the disk which explains exactly how to use your program. 3. Fill in this form, sign it, and send it without delay to: Coverdisk Software, *Amiga Format*, 30 Monmouth Street, BATH BA1 2AP. You could win a share of up to £800 prize money for the best programs each month.

X-COPY II v2.4

X-COPY II is the ultimate disc duplication system for your Amiga

X-COPY

Designed specifically for your Amiga...

❖The most comprehensive back-up facility❖Mouse controlled❖Also backs up ST, IBM etc❖Adapts itself to any configuration❖Checks discs for errors❖ Formats discs in 36 seconds❖Optimises data, re-organises files for faster loading❖Full update service❖

AVAILABLE NOW ONLY £29.99 + £1.00 POSTAGE & PACKING.

X-COPY II is a hardware & software package. Although it will work happily on a single drive system, superior results can be achieved with an external disc drive.

1988 COPYRIGHT ACT. SIREN SOFTWARE NEITHER CONDONES NOR AUTHORISES THE USE OF ITS SOFTWARE FOR THE REPRODUCTION OF COPYRIGHTED SOFTWARE. THE FACILITIES OFFERED BY X-COPY II ARE INTENDED TO BACK UP USERS OWN SOFTWARE, PD SOFTWARE & OTHER SUCH PROGRAMS WHERE PERMISSION HAD BEEN EXPLICITLY GIVEN. IT IS ILLEGAL TO MAKE COPIES OF COPYRIGHTED MATERIAL WITHOUT THE PERMISSION OF THE COPYRIGHT HOLDER.

X-COPY II IS THE BEST, GUARANTEED

OUR GUARANTEE:- At time of purchase, if you can find a program that is more powerful than X-COPY II, we will refund your money.

Ordering x-copy II



Access/Visa orders can be placed by telephoning 061 228 1831. For mail order, fill in the order form below and send with a cheque or postal order to:- Siren Software, 84-86 Princess St. Manchester M1 6NG. England.



NAME ______________________________

ADDRESS ______________________________

LIGHTNING Strike



Could *Phasor Strike* be the ultimate in interactive games for the Amiga? **ADRIAN A CHROME** dons a uniform and charges...

Just a few steps from Blackpool's seafront and the famous golden mile, the entrepid adventurer can enter a different world. A world where the scenery is shrouded in a dense fog, a world where the atmosphere is heavy with the hum and crackle of electrical discharge, a world where an opponent can come screaming banshee-like from the mist at any moment, dispensing instant destruction from his gun before disappearing once more into the shadows.

This is the world of *Phasor Strike,* the new craze which Strike Leisure are predicting (and, considering their investment, no doubt hoping) will storm across the country over the next few years. First conceived in the United States and subsequently popularized in both Australia and New Zealand, the game is an extension of the 'paint-ball' concept which has found so many devotees recently.

Although the basic idea is the same, the strategy is very different to paint-balling, where teamwork and co-operation are of the prime importance. In *Phasor Strike,* where the playfield is dark and obscured by mist, any movement must be treated as a possible act of aggression and it is a case of kill or be killed. One advantage *PS* has over paint-balling, however, is that after a game one goes home without the bumps and bruises that are so easily sustained whilst playing paint-ball. Although *PS* is fast and furious it is a thoroughly non-contact sport and, since all you ever get shot by is a beam of light, it is far less painful than a plastic ball travelling at 5 metres per second.





RIGHT: The team are kitted out and ready to enter the field of battle.

LEFT: The power packs plugged into the wall and all ready for action.

BELOW RIGHT: A Phasor warrior deals with an attack from above.

This all sounds like jolly fun, but what interest is it to you, the reader of *Amiga Format*? Well the answer to that is simple; all of the many lighting and sound effects that help make the game so exciting to play are controlled by a Commodore Amiga. Or two, to be more accurate, since the current installation in Blackpool has two arenas each with its own Amiga 2000 in charge of running the business end of things.

Kitted for Combat

A game of *Phasor Strike* begins in the entry port, where competitors each don a control pack. These combine an infra-red receiver and score keeper and are bedecked with flashing LEDs which serve to make you all too visible in the Darkness.

Connected to the pack is the phasor weapon, a gun which emits both a beam of infra red and a ray of visible light so that you can tell if your shots are finding their intended targets. When all the players are kitted up and divided into two teams (Green and Yellow, to avoid any confusion for those of the population who are colour-blind) it is time to enter the arena.

The area of play is a complex maze of ramps and balconys, full of dark corners and obstacles to conceal and confuse the players. Once play starts you find that the darkness and profuse amounts of smoke combine to make recognition of fellow team members almost impossible, so it quickly becomes a case of every man for himself.

The object of the game is to end up with a higher score, both individually and as a team, than your opponents, but points are not gained by making a hit – rather they are lost by sustaining one on yourself. Of the two ways to prevent getting hit, the first is to hole up in some little cranny and hope you are not spotted, which is none too easy when your front and back are flashing away like the Christmas lights on Oxford street. The other option is to keep moving and try to present as difficult a target as possible to the enemy.



Dowling COMPUTERS

MAIL ORDER DIVISION

HEAD OFFICE:
Unit 48
Tyne Road
Sandy, Beds, SG19 1RB
Tel: 0767 681750/60
Fax: 0767 681730





ALL PRICES INC VAT PLUS A FULL 1 YEAR GUARANTEE

AMIGA DEALS

STANDARD PACK:- Amiga 500 computer, Mouse, Modulator, Power Supply, Operating Manuals & Disks etc — ONLY **£339.95**

TENSTAR GAMES PACK - ONLY AVAILABLE WHEN PURCHASING AN AMIGA

★TEN STAR★ *COMPRISING* ★ Ikari Warriors ★ Buggy Boy ★Wizball ★ Terrorpods ★Barbarian ★ Thundercats ★ Art of Chess ★ Amegas ★ Insanity Flight ★ Mercenary

ALL TEN GAMES FOR JUST **£24.95**

BATMAN PACK +	FLIGHT OF FANTASY +	ULTIMATE GAMES PACK
★ Amiga Computer as in Standard Pack ★ Batman The Movie ★ F18 Interceptor ★ New Zealand Story ★ Deluxe Paint II ★ Tenstar Games Pack	★ Amiga computer as in Standard Pack ★ F29 Retaliator ★ Rainbow Islands ★ Escape from the Planet of the Robot Monster ★ Deluxe Paint II ★ Tenstar Games Pack	★ Amiga Computer as in Standard Pack ★ F29 Retaliator ★ Rainbow Islands ★ Batman The Movie ★ F18 Interceptor ★ New Zealand Story ★ Deluxe Paint II ★ Escape from the planet of the Robot Monster ★ Tenstar Games Pack ★ Megablaster Joystick ★ High Quality Dust Cover ★ High quality mouse Mat
ONLY **£369.95**	ONLY **£369.95**	ONLY **£399.95**

MUSIC SCOOP

We have packaged the best MUSIC SOFTWARE for the Amiga together with the best MIDI interface on the market. Look at what you get:

MUSIC-X widely acclaimed as the most comprehensive and easy to use professional music utility for the Amiga. **RRP £229.95.**

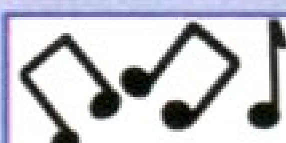
MIDI INTERFACE 2 Latest high quality product from Trilogic offering a total of FIVE MIDI sockets alleviating the need for lead swapping once connected to a MIDI system. **RRP £34.95.**

MIDI LEAD 1 metre lead allowing you to set up and get going! **RRP £4.99**

This total package would normally cost you over £269 but we are literally giving them away at the incredible price of: **£99.95**

Music-X available separately at £79.95

HURRY - STOCKS LIMITED ON A FIRST COME FIRST SERVED BASIS!



THE star COMPUTER PRINTERS

= Registered Dealer =



Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products

OFFICIAL U.K VERSIONS	RRP	OUR PRICE
STAR LC10 mono 144/36 C.P.S	£229.95	£149.95
STAR LC10 II 25% faster version	£263.35	£169.95
STAR LC10 Colour, 7 colours	£297.85	£189.95
STAR LC24-10- 24 pin multifont	£343.85	£229.95
STAR LC10 Sheet Feeder (auto)	£74.75	£59.95
STAR LC10 Mono Ribbons	£5.95	£3.95
STAR LC10 Colour Ribbons	£7.95	£5.95
STAR LC24-10 Ribbons	£7.95	£5.95
STAR LC10 Quality Dust Cover	£7.95	£5.95

PERIPHERALS, ACCESSORIES AND SERIOUS SOFTWARE

	RRP	OUR PRICE
Commodore 1084S Stereo Monitor	£299.95	£249.95
Cumana 1 meg Quality Drive - The best	£89.99	£69.99
High Quality Amiga Dust Cover	£9.95	£5.95
High Quality 1084S Dust Cover	£12.95	£6.95
Replacement Amiga Power Supply	£59.95	£39.95
Kindwords 2 wordprocessor	£49.95	£29.95
Superbase Personal 2	£99.95	£29.95
Maxiplan Spreadsheet	£99.95	£29.95
Photon Paint 2 - Latest Version	£79.95	£29.95
Deluxe Paint 2 - Excellent Value	£49.95	£9.95
Aegis Sonix version 2	£69.99	£29.99

★ 3 1/2" DISKS ★ 3 1/2" DISKS★ ★ 3 1/2" DISKS ★

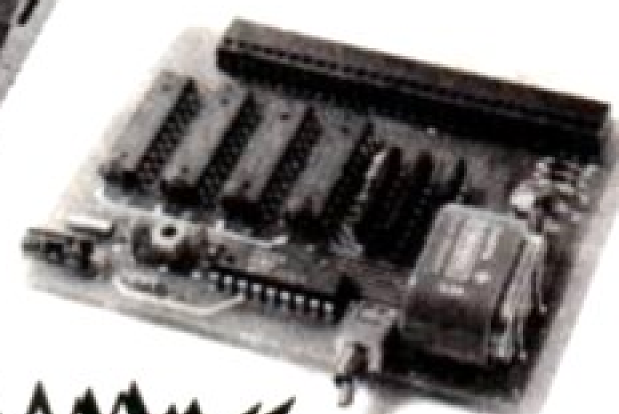
All our disks are of the highest quality, are 100% certified and are individually wrapped. We guarantee each disk is either Sony, TDK or Verbatim unbranded.

50	£26.99
100	£49.99
200	£89.99
400	£169.99
Roll of 1000 labels	£6.99

THE MEGABOARD
RAM EXPANSION 500

UP-GRADES YOUR AMIGA A500 FROM 512K TO 1 MEGABYTE!





FEATURES
- Only top quality components used
- Real Time clock with NICAD battery backup
- Memory disable switch to revert back to original 512K
- 12 months guarantee. Fully tested prior to despatch

Purpose designed for the AMIGA A500

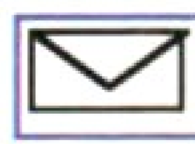


ONLY £44.95

ORDERING MADE EASY



Order by phone by calling our Head Office quoting your Access/Visa Number



Order by Post - make Cheques, Building Society Drafts or Postal Orders payable to Dowling Computers

Add £6.00 courier delivery for all orders over £100.00 (UK mainland only). Add £2 for orders under £100.00

While you are tearing around trying not to be shot, it only makes sense to attempt to lower other people's scores by landing a few well-aimed shots on their control packs. So for around ten to fifteen minutes the best course of action is to make like a cross between Rambo and Buck Rogers, and see what havoc you can wreak. A hit on the back will rid you of two points whereas a hit on the front will reduce your points total by three.

Throughout the game the arena is patrolled by a marshal, who makes sure that no-one is breaking the non-contact rule. Anyone found contravening the rule would have their control pack disabled and be ejected from the game. When the game time has elapsed – which it does all too quickly, but time does fly when you're having fun – the sound system issues the command to go to the exit port.



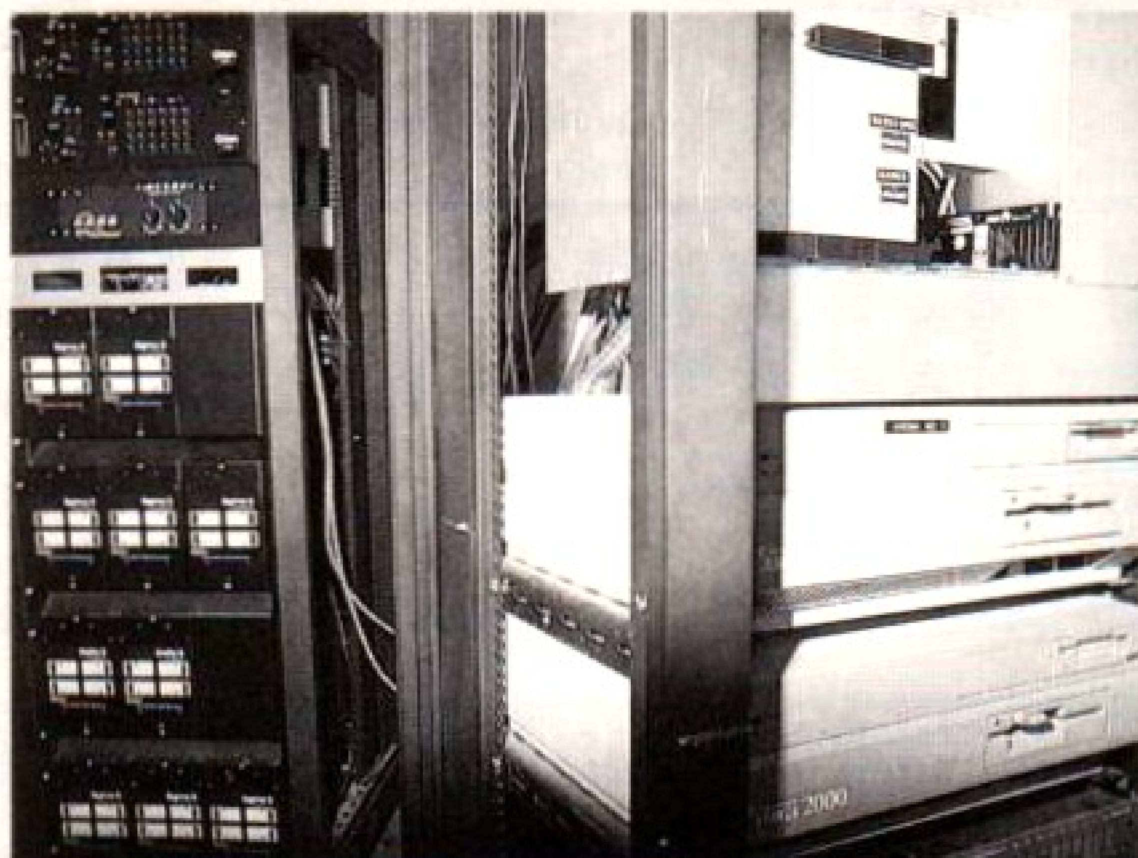
RIGHT: The work is under way to refit both the arenas. Here we can see the "Cyberpunk environment" being created.

MISSION CONTROL

The system at *Phasor Strike* in Blackpool consists of:

1 Amiga 2000 per arena
Both have PC Bridge boards and 20 meg hard drives and are fitted with purpose-built interface cards from expansion slot to connect to a 19-inch back-tray housing all the control equipment for the game. This consists of:

- **Game scoring system**
- **Game control**
- **Sound effects control**
- **Lighting control**



The Amigas and the Orion lighting stack they drive.

Game scoring system takes the downloaded information from the control packs and displays it on colour monitors in the reception area.

Game control consists of timing and supervisory functions, as well as audit systems to record the numbers of players and sessions. A feed from the cash register on site is also monitored allowing a modem to download details of the site's activities to head office overnight.

The system monitors any faults that may have occured and reports on these as well.

Sound effects are produced by the 2000 using the internal digital/analogue converters from sampled sound effects files. Sounds are triggered by sensors concealed around the arena; sensors also trigger the Amiga to instruct an Orion lighting controller to initiate pre-programmed lighting sequences.

The entire system is auto-booting in case of interruption in the power supply.

Scoring the Hits

As the players file back into the equipment room the control packs are turned off by an infra red signal and it is just a matter of hanging the packs up and plugging them into the wall-mounted sockets for downloading of the scores.

After the Amiga has done a little number-crunching one of two large video screens in the foyer reveals the scores to the teams, giving individual points and team totals, and appointing a high-score player for each side. Of course anyone in the foyer can see what you got, so either your glory or your embarrasment will be broadcast to the world. Remember, if you take your boyfriend, girlfriend, mum or dad along, not to make any outrageous claims about your score unless you are pretty sure you can back them up. If you happen to go along with someone who does not want to play, each arena has a viewing platform, entry to which is free.

Although the game is very enjoyable, there are one or two niggles which could be sorted out to make it even more fun. Firstly the position of the infra-red receiver on the front of the control pack is very obvious, and this means that unscrupulous player can keep it covered with his hands for the duration of the game, thus ensuring they never sustain a front hit. Obviously only an utter cad would do this, but it would be so easily preventable by mounting the receiver video-style under a smoked plastic frontplate, thus confounding any attempt to cover it.

Secondly, the scoring is done by number, each pack having a unique number by which it is identified on the video screen at the end of the game, but this number is not written on the wall where the packs plug into the download socket, nor is it recorded anywhere on the pack itself, so if you don't pay complete attention when the game marshal tells you your number as you are kitting up, it is possible that you will not be able to discover your score at all.

But these things aside *Phasor Strike* is still a great deal of fun; in fact, whoever said "It is not the winning but the taking part that counts" could well have been speaking about this game. The real pleasure comes not from finding out that you scored your team's high score, but from tearing around in the arena zapping away fiendishly.

The complex at Blackpool is currently being refitted and two new arenas are being built. The first of the new designs will be a cyberpunk environment straight out of *Blade Runner,* for those who wish to track down and destroy replicants; the other arena will be a simulated jungle landscape more suited to players who wish to put the Predator to rest. Both the new interiors are the work of Bryce Walmsley and Richard Sharples, set designers who have worked in TV and theatre as well as designing backgrounds for rock videos. The work should be complete by the time you read this.

Another innovation that *Phasor Strike* intends to introduce in the near future is the use of real lasers in the game. As you can imagine safety is a very important factor, and much time has been spent creating a system which is safe to use without requiring players to wear eye protection.

One of the surprising things about the technology used by *Phasor Strike* is that, with the exception of the Amigas, it is all British. And even then the software in use was developed by Checkmate Digital. So, while the game was originally devised in the States, British innovation has served to create one of the most advanced examples of it anywhere in the world.

Phasor Strike is just about the most interactive computer game yet, the ultimate experience for all true shoot-em-up fans, and can be found at Station Road, Blackpool (opposite the South Pier). ■



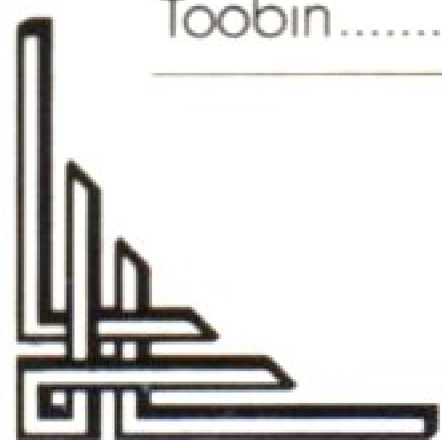

YUPPIES
COMPUTER CLUB

Manchester United	£15.85	Black Money	£15.50	PinBall Magic	£15.85
Man Hunter New York	£15.50	Conqueror	£15.75	*Premier Collection 3	£19.00
Kid Gloves	£15.85	Ghouls N Ghosts	£15.50	*Italia '90	£14.50
Black tiger	£15.85	Iron Lord	£15.99	Super Cars	£13.25
Full Metal Planete	£15.85	North & South	£15.95	Xenonmorph	£15.85
Rainbow Islands	£15.50	Robocop	£13.50	Ninja Warriors	£15.00
Ninja Spirit	£15.80	Shadow Of The Beast	£15.00	Beach Volley	£15.50
Blade Warrior	£15.85	Space Ace	£28.50	Chase HQ	£15.40
Fiendish Freddy's Big Top Fun	£15.85	TV Sports Basketball	£18.50	*Day Of The Viper	£15.75
Cyberball	£13.50	Xenon II Megablast	£14.85	Hard Drivin'	£13.40
*Elvira	£21.00	Traid Vol 3	£18.90	*Lost Patrol	£15.50
World Championship Boxing Manager	£14.00	Magnum 4	£15.85	Red Heat	£12.00
*Venus	£15.85	688 Sub Attack	£15.75	RVF Honda	£13.85
X Out	£16.00	F29	£15.50	Sim City	£17.85
Toobin	£10.00	Impossamole	£13.50	Stunt Car Racer	£14.50
		Pipe Mania	£15.85	TV SportsFootball	£16.50
		Hammerfist	£15.50		

* Titles not yet released - will be despatched upon release

Please add £1.00 P&P and send Cheques/Postal Orders to:

YUPPIES COMPUTER CLUB
81 Thurmond Crescent, Stanmore, Winchester, Hampshire, SO22 4DH.




MAIL ORDER

SOFTSELLERS

MAIL ORDER

6 BOND STREET, IPSWICH, SUFFOLK IP4 1JE

5A DOG'S HEAD STREET, IPSWICH, SUFFOLK. (RETAIL)




36A OSBORNE STREET, COLCHESTER, ESSEX. (RETAIL)

MAIL ORDER PURCHASE LINE (0473) 257158/210605 FAX NO: (0473) 213457

JOYSTICKS

Cheetah 125	£7.99
Cheetah Starprobe	£11.99
Pro 5000 Extra Glo Green	£13.99
Pro 5000 Extra Glo Red	£13.99
Pro 5000 Black	£11.99
QS Turbo III	£9.99
Euromax Racemaker	£24.99
Konix Navigator	£11.99

DISC BOXES WITH DISCS

3.5" 40 Holder Lockable with 10 3.5" DSDD discs	£12.99
3.5" 40 Holder Lockable with 20 3.5" DSDD discs	£19.99
3.5" 40 Holder Lockable with 40 3.5" DSDD discs	£33.99
3.5" 80 Holder Lockable with 10 3.5" DSDD discs	£15.99
3.5" 80 Holder Lockable with 40 3.5" DSDD discs	£35.99
3.5" 80 Holder Lockable with 80 3.5" DSDD discs	£55.99

PERIPHERALS

Replacement mouse + mouse holder + mouse mat	£29.95
Four Player Adaptor	£5.95
Mouse Mat	£4.95
Joystick Extender	£5.95
Dust Cover	£4.95

DISCS

Quantity	10	20	50	100
3.5" DSDD Unbranded	£7.99	£14.99	£34.99	£59.99
3.5" DSDD Sony Branded	£11.99	£22.99	£54.99	£99.99

DISC BOXES

3.5"	40 Holder Lockable	£5.99
3.5"	80 Holder Lockable	£7.99
5.25"	50 Holder Lockable	£4.99
5.25"	120 Holder Lockable	£6.99

CHEQUES AND POSTAL ORDERS PAYABLE TO SOFSELLERS. POST AND PACKING FREE IN UK. OVERSEAS £1.50 PER ITEM. Subject to availability and price change without notice. *Some titles may not be released at time of going to press.
Shop prices may vary, but personal callers can claim advertised discounts on production of cut-off slip.

SCHOOL'S OUT





The first of an occasional series that tests the mettle of educational programs for the Amiga. **DAMIEN NOONAN** is your guide.

The Amiga has much to recommend it as a learning tool for children. In particular because it has a great capacity to work through attractive, colourful pictures and to make interesting noises – even to use synthesised speech – it's one of the few things that can drag the children of the video age away from the telly. Plus the fact that computers have a certain credibility and appeal for kids nowadays, anyway.

Since the Amiga is such an outrageously flexible machine, Commodore are particularly keen to see it being bought by parents who have young children: the reasoning being that ma and pa can do their serious work (home accounts, word processing, DTP) and their hobbying (music, computer art or alien-blasting) while the little 'uns are helped out with their pre-school learning (reading, 'riting, 'rithmetic and the like).

To this end, Commodore will soon announce a special bundle of the Amiga 500 aimed at the under-eights. A logical move, the company believes, as follow-up to the "Class of the 90's" pack, which was aimed at a similar combination of parents and slightly older children. And also a recognition, perhaps, of the lack of support currently given to a growing market for pre-school computing.

What do The Kids want?

The Class of the 90's pack very much reflects the philosophy of secondary schools using computers: they would rather have the children using real, 'adult' applications of the kind they may be using in later life. It contains a spreadsheet, a database, a powerful art package, word processor, DTP, and a music package.

The priorities of pre-school learning and primary school, however, are different. Although teaching 'computer literacy' remains a general aim, basic skills such as logic, maths, reading and spelling are more important. The needs, then, are different.

Until now, Commodore's only official contribution to this age-group has been *Amiga Logo*, an excellent version of the programming language used in many schools from the age of five upwards, and the *BBC Emulator*, intended to make old faithful BBC programs useable. *Amiga Logo* was reviewed in *Amiga Format* Issue Seven. They have also tended to emphasise the benefits to even very young children of paint programs such as Electronic Arts' *Deluxe Paint*.

The programs covered in the following pages are of a very different ilk. They are mostly American in origin, presumably because more parents of young children over there are looking out for this sort of thing. They are nearly all intended for very young users, many for pre-reading or pre-school. Most of them make very heavy use of the Amiga's graphic power and of synthesised sound, in an attempt to keep a child entertained and absorbed. And, mostly, they try to replace traditional ways of teaching basic skills such as reading and maths.

Worthy, Worthwhile, Worthless?

It's worth noting, just before we take a look at the software for this month, that computer programs for young children can suffer from one very obvious pitfall.

The danger is that a child, plonked down in front of a computer, lacks the interaction with real, live people that is a vital part of its social, as well as intellectual, education. Is it really a good idea to have a computer reading your child a story? Wouldn't both you and the child miss the sharing and the companionship? Wouldn't it help stunt a kid's emotional development? Think hard about these.

You may not agree, but one of the biggest arguments against video games is that children, locked in mortal combat with aliens, are usually locked away from other children. Schools' use of computers tends to concentrate on working in groups so that problems raised by the machine become a focus for discussion and group problem-solving. Well worth bearing in mind. So, with that warning, on to the software...

AT THE ZOO
MERIT SOFTWARE
£24.95

This is essentially a colouring book on disk. The scenario, as you might have worked out, is a trip to the zoo, so we open with a pic of two kids sitting by the entrance all ready to embark on their day out.

The piccies to be coloured appear as line drawings on a nice, neutral grey background and are accompanied by an appropriate sampled sound effect. Each 'page' is a different animal or scene, starting with a visit to the elephants and carrying on an exhaustive tour via the aardvarks, orang-utan and oryx to end up at the ostriches.

The pencil pointer is used to select a colour from the palette of 24











AT THE ZOO

Top right, the uncoloured drawing; above right, the half-finished drawing; and below, fully coloured.



and then point at the area to be filled, which floods rapidly. Only criticism here is that some areas are tiny and rather fiddly to point to. Areas can be re-filled if the chosen colour doesn't please, an 'oops' button can be clicked to undo mistakes and an eraser can be used to clear the pic and start again.

The program saves out as you go along, so it is possible to colour the whole 'book' without doing it all in one sitting. When you rejoin, your work so far is pencilled in at a rapid rate of knots. You can quit out or print a piccie at any time.

Conclusion

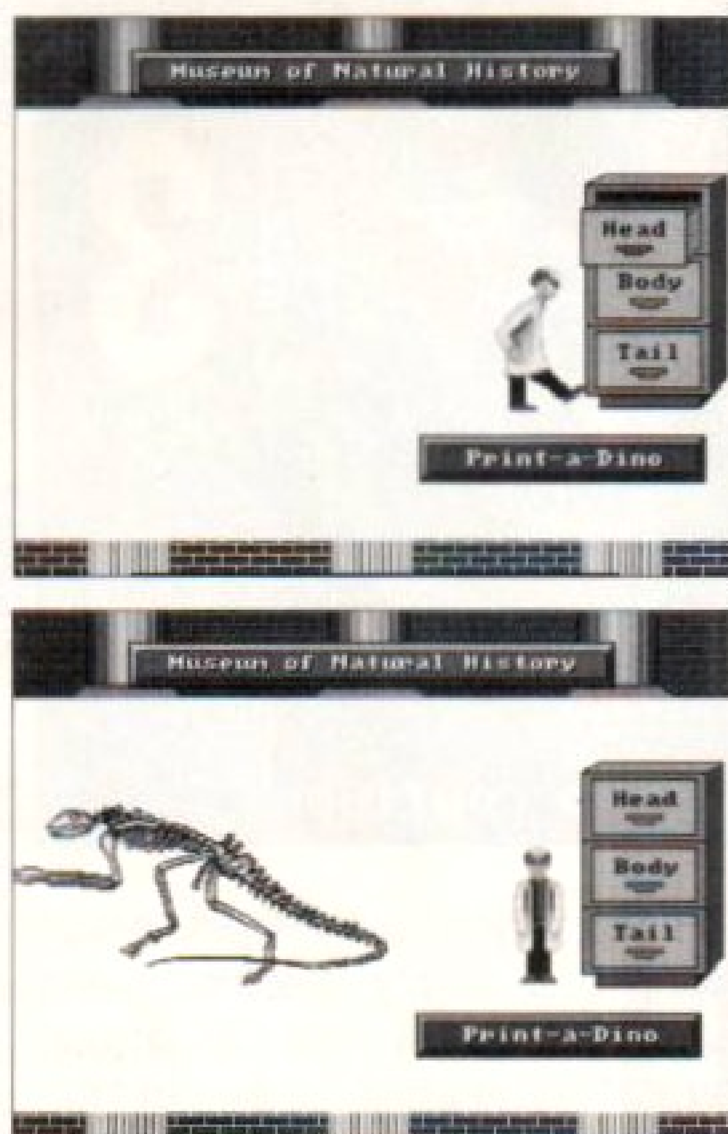
The sounds are on a separate floppy, so if you don't have two drives you'll have to do a lot of disk-flipping if you want to hear them. As far as it goes, the program is excellent – but it is just a colouring book. The glowing, saturated colours and the fact that you can't colour over the lines (do you remember how horrific that seemed when you were little?) should make the colouring book of the 90s a big hit with the little 'uns and the animal recognition has an educational value. But it seems a shame that the program could not have been a wee bit more ambitious.

DESIGNASAURUS DESIGNWARE £34.95

Dinosaurs seem to be one of the most enduringly popular subjects for children – and why not? This particular program attempts to fill in a few more details about the lumbering lizards, exploring their relationship with their environment, their diets, and their physical make-up.

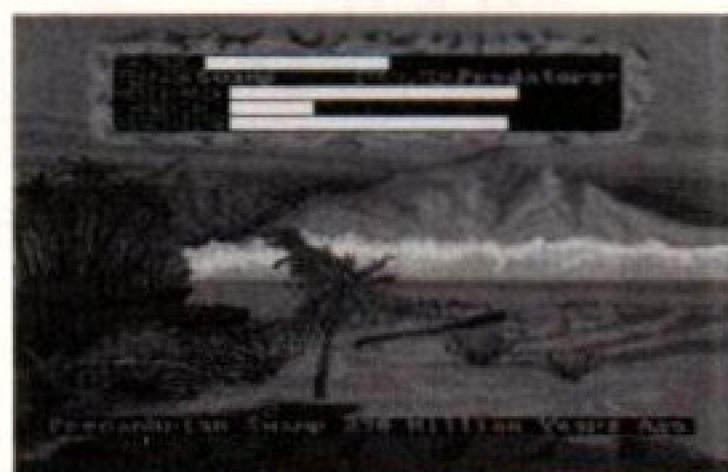
There are three parts to the program. The first is a game in which the player must control a brontosaurus, stegosaurus or tyrannosaurus rex as it sweeps majestically across the plains and swamps of 170 million years ago. The aim is survival, in pursuit of which finding appropriate food is vital. The learning part is sneaked in nicely, here, with diet, habitat and historical info all of siginificance but not rammed down the player's throat. And there's a reward stimulus – if the dinosaur survives for five whole screens (which is no easy task) a certificate is granted which can be printed out and kept.

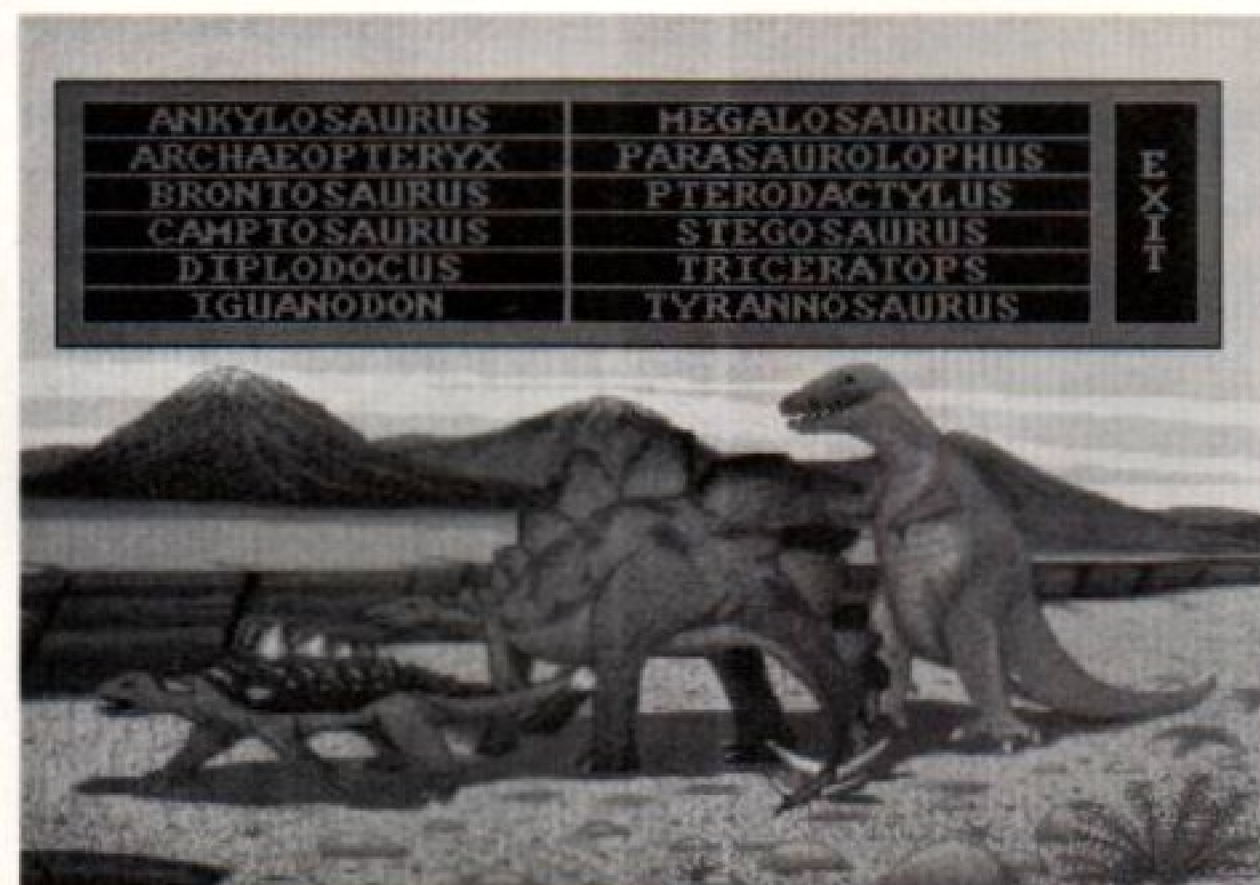
The second part is dinosaur construction. The job here is to build a complete skeleton from a head, body and legs, and a tail. Parts of lots of different dinosaurs can be matched and mismatched to your heart's content. Each part is accompanied by a detailed description of the dinosaur it belongs to, so there's a lot to learn here too. The third part of the program is the act of printing out pictures of the dinosaurs. The skeletons from the second part can be printed, as can a large range of line drawings of the creatures as they would have looked. These latter can be coloured in after printing – get out the crayons! Pictures can be printed to normal sheet size, expanded over four sheets or – and this is a very clever little extra bonus – printed onto thermal transfer paper to be ironed onto a T-shirt.



Conclusion

Great idea! The lasting charm of the old thunder-lizards is not about to fade, but the nice thing about this one is the way it sneaks all the hard facts in amongst the fun. Take the kids to the Natural History Museum, then give them a copy of this to play around with. Only slight criticism is that there's less to the program than might have been possible, but it certainly scores well on sheer appeal.







DESIGNASAURUS

Top and above left, building a skeleton; left, surviving in the swamps; and below, a bunch of dinosaurs just asking to be printed!

UNCLE D'S CON-SOUND-TRATION ALOHAFONTS £19.95

This is the only real game amongst the software reviewed this month. As the name might suggest, it makes considerable use of the Amiga's sound capabilities and aims to test the player's powers of concentration and memory.

The basic idea is rather like that quiz show on telly where contestants have to remember what is hidden underneath the various squares on a grid. Instead of one square, however, there are two. The player must match a graphic image from one of the squares on the left-hand grid with the appropriate sound from the right-hand grid.







CON-SOUND-TRATION

Top, the playing options; middle, getting an answer wrong, and bottom, success at last!

Play follows a simple pattern: the player just clicks somewhere on the left-hand grid, sees what image is displayed, and clicks on the square on the right-hand grid he thinks may conceal the correct noise. If he is right and a match is made, a clown's face smiles and the pair of squares turns green. If he is wrong, the clown's face grimaces. Either way, play continues until all the squares are correctly matched.

There are options for one or two players, for four different skill levels (the size of the grid varies from two-by-two to five-by-five: naturally five-by-five is much harder) and for three different types of game. The types of game are: alphabetical, where the letters of the alphabet must be matched with their sounds; numerical, where numbers are paired up;

and pictures, where an elephant must be made to trumpet or a telephone to must be coerced into ringing.

Conclusions

All in all, not half a bad little game. It is pleasantly presented and the sampled sounds are admirably clear. It won't task an adult's brain too heavily, but younger children will probably enjoy it and the two-player option will get a lot of use. The added bonus of including letters of the alphabet and numbers is obvious, though it couldn't be used to actually teach these: more to reinforce or introduce them.

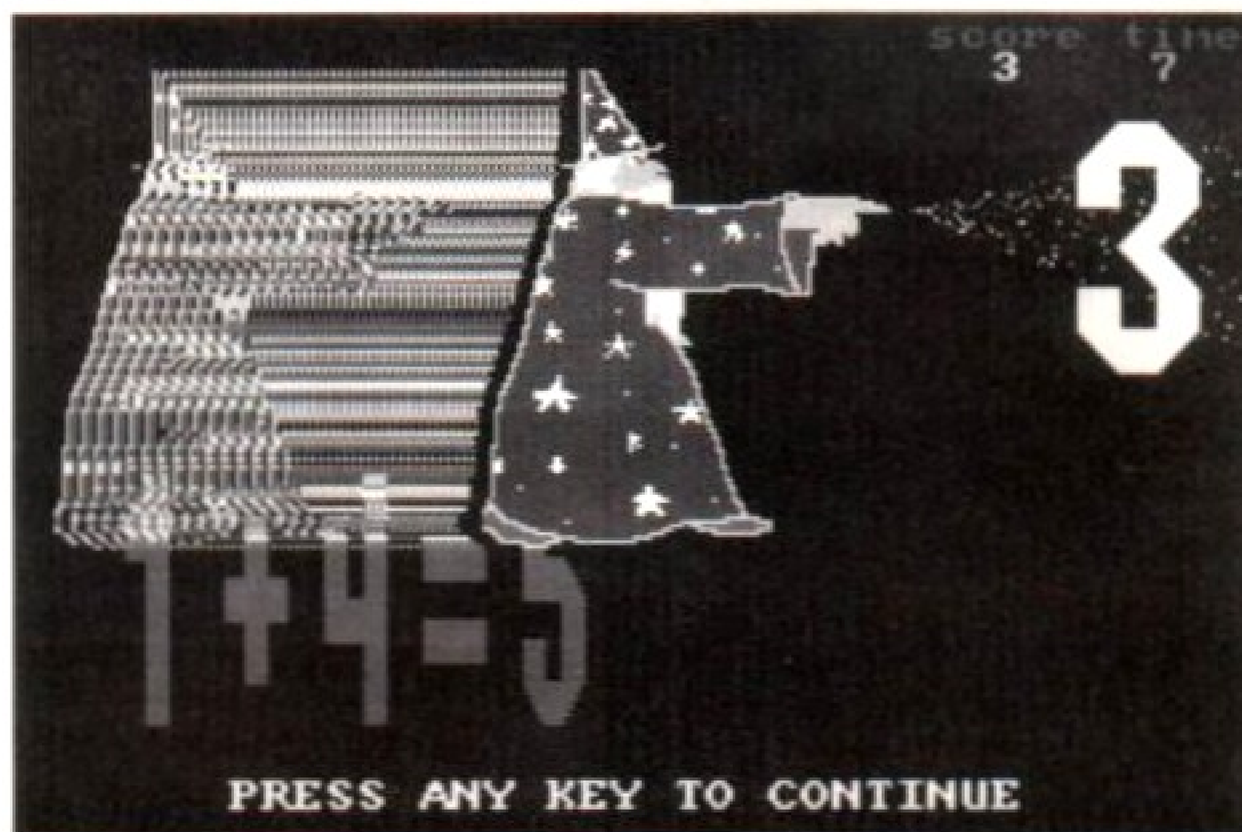
Its only fault may be lack of longevity, because it uses the same pictures and noises every time – though it does hide them at random around the grid, so the chances of repeat games are slight.

MATH-A-MAGICIAN
THE OTHER GUYS
£22.95

The magician is a character who hopes to make the learning of simple sums fun. Hmm. You may argue that he's up against a loser from the start because maths is never fun. Not necessarily true...

All this 'game' really does is display a sum in large, friendly letters on the screen, reading it out aloud as it does so, and wait for you to answer it. If your answer is wrong, a voice encourages you to try again. If you succeed, a whizzy graphic of the magician appears and a fatuous piece of praise along the lines of "You must be a personal friend of Albert Einstein!" is read out.

The game is backed up by a large grid of the times and addition tables using the numbers one to twelve, which can be explored.









MATH-A-MAGICIAN

The storm, left, warns of the magician's imminent appearance.

After choosing skill levels, bottom, the player is asked a question, middle left.

The magician grants a score to reward a correct answer, top; then the owl, above, sums up the amount of right and wrong answers that were given.

Conclusion

The speech is very good, clearly because it is sampled, not synthesised. Sadly this means there is space for few different comments from the magician, so it does get repetitious. Overall, if you want your child to practise a few sums, this program is not a bad way of doing it: but the fact that this is maths is not at all disguised, so it's hard to see it being 'fun' if the child has already been put off by maths. It is always a good idea to disguise the learning process so that chidren think they are just playing, which just does not happen here.

THE TALKING STORYBOOK "LITTLE RED HEN"
DESIGNING MINDS
£19.95

Certainly a very clever little project, but of how much use? This is, as you may already have guessed, a storybook that talks to you.

In common with many of the educational programs reviewed here, this makes brave, broad steps in the attempt to use the Amiga's sound and graphics power to the full. The pictures are very pretty indeed. The music is really very enchanting. The story – an old children's favourite – is good. And the synthesised speech is, well – interesting. The robot voices don't really make for the most atmospheric of tale-telling.

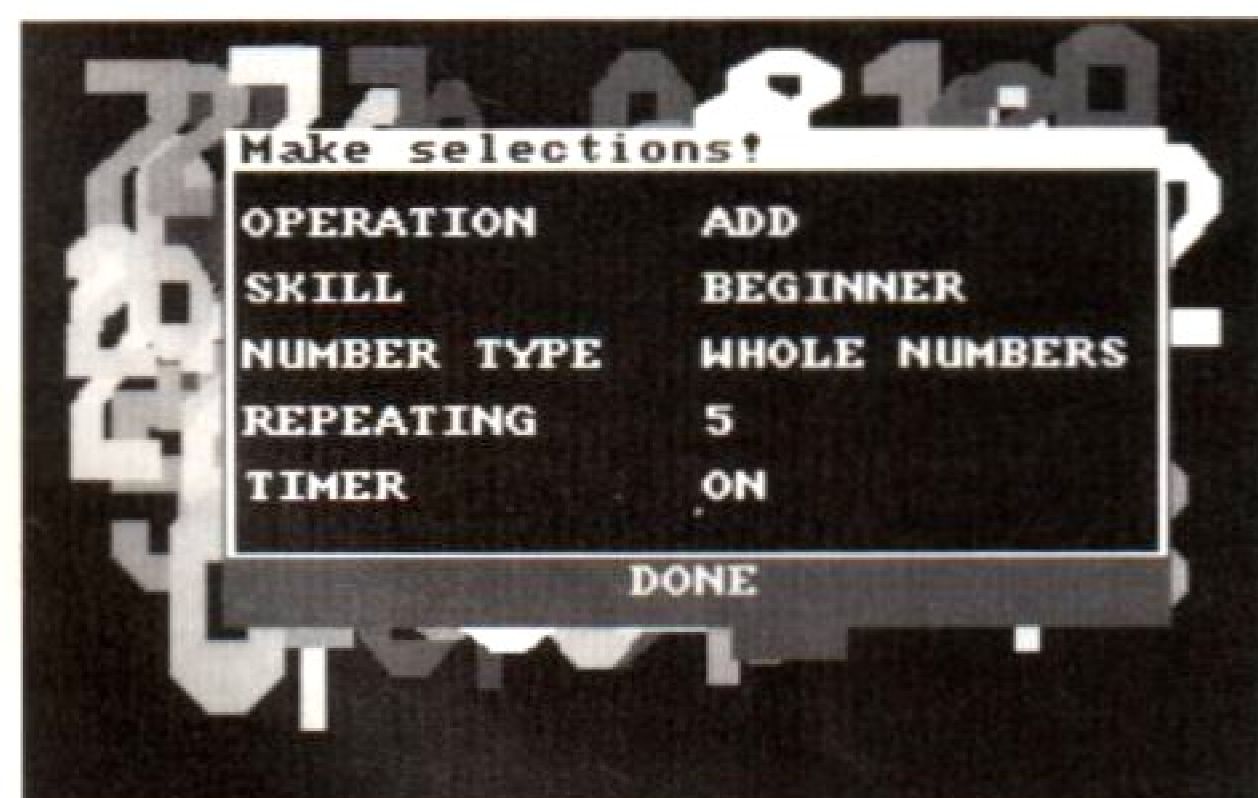
Options to turn off the speech and music are available, as are ones to have words highlighted as the story proceeds and to play a little word-finding game. You can read out the story to the kids yourself as the pictures go by, or you can set it up to play as a film abd sit back and watch.





Conclusions

As anyone who has used the speech synth on Workbench 1.3 Extras will know, it's an impressive gadget – but gets nowhere near how you and I speak. Now, if you really want stories read to your kids by flat, toneless robot voices, that's fine – but it doesn't really come off as a learning aid. Apart from anything else, kids are likely to have trouble recognising the words as they are spoken. To be honest, the bond provided by reading your kids a picture book and the chances given for them to ask (perhaps pointless, but still sociable) questions is not worth losing out on. Buy the collected works of Maurice Sendak. This program might prove a novelty and a diversion, but is by no means an alternative.







WORLD ATLAS CENTAUR SOFTWARE £34.95

The only one of this bunch really aimed at older children. Putting an atlas of the world on floppy disk is an ambitious idea, but one of which the Amiga is quite capable. This program goes further still, though – as a learning resource, it aims to provide facts, figures and background history on 170 nations of the world.

As a product of US programmers, it inevitably has a certain Stateside bias with a choice between the USA and the rest of the world being one of the key divisions. But it does provide impressively detailed facts and figures on all the countries of the world, too.

Each individual nation is accessed by clicking on a map of the world to decide a continent, then clicking on any country of interest. That country is first identified then, if you wish to proceed, a detailed information screen appears filling you in on size, poulation, the major cities and the like. Further info is, disappointingly, only a graph of popultion growth – but by that stage, you don't really need any more. There's bags of facts and figures at your fingertips here. Each country also has a scrolling potted history which borders on the sketchy.



Population 4,025,281,000
Area 196,938,800 Square miles
Weight 6 sextillion, 588 quintillion short tons
Length of equator 24,901.55 miles
Equator diameter 7,926.41 miles

THE EARTH
PRESS LEFT MOUSEBUTTON TO CONTINUE

Consists of :
26 % Land
3 % Ice
71 % Water

35 % Oxygen
30 % Iron
15 % Silicon
13 % Magnesium
2 % Sulfur
1 % Calcium
1 % Aluminium
0.5 % Sodium

MYPAINT

The range of drawing tools on offer, top right, includes thick and thin lines and symmetry. Note the surprise drawing being revealed!

A lovely freehand drawing, right, and a coloured-in drawing of a rocket from the range on disk, below.

WORLD ATLAS

Choose a continent from the world map, top; then select a nation to study, left.

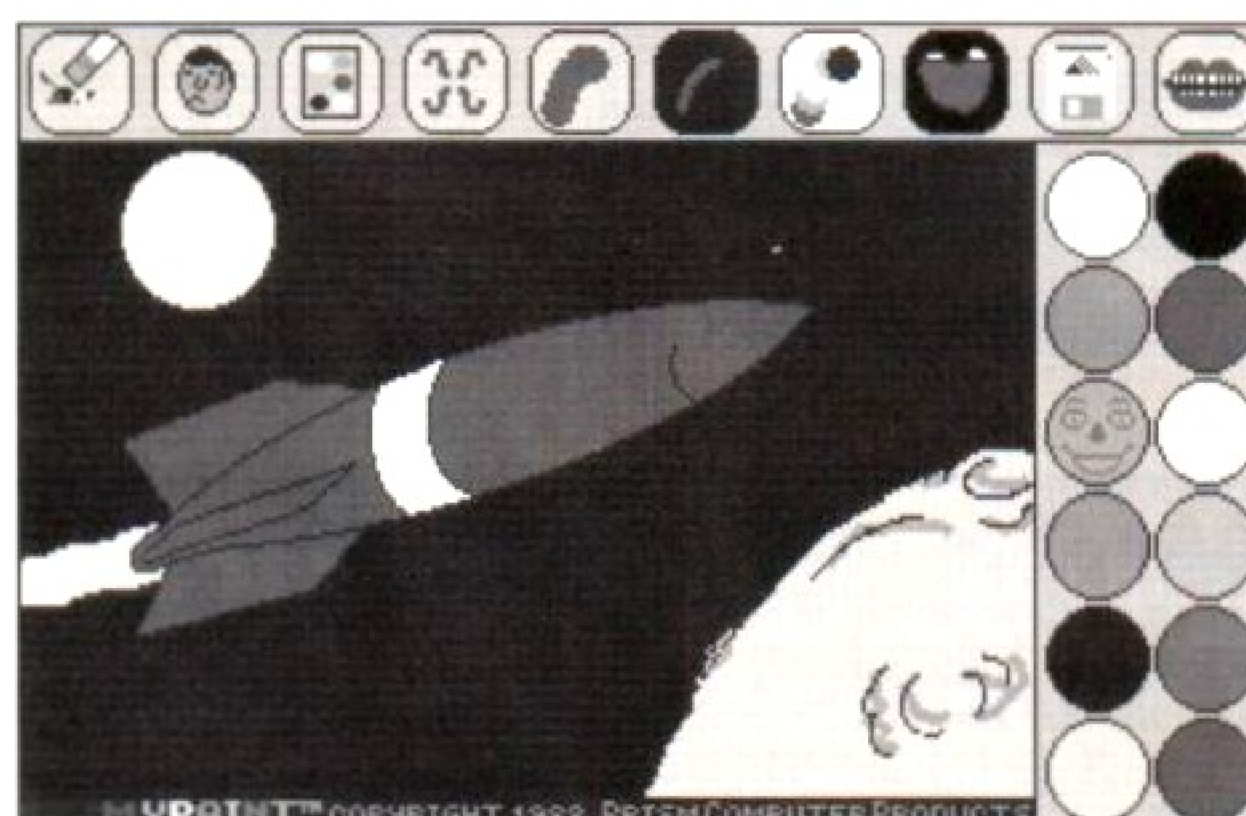
Below; facts are certainly at you fingertips with *World Atlas*!

Other options allow you to get details of international organisations such as NATO or OPEC and to call up lots of different statistics about the Earth, as well as to sort countries out by their size or their language.

Conclusion

All in all this is a cracking idea and could provide a good means to stimulate report-writing or special projects within a school environment. There is, however, one big problem: this project has bitten off more than it can really chew. The national histories are at best sketchy and at worst entirely misleading, featuring some dubious spelling and some rather selective choice of facts: if the whole history of France to 1800 has been summed up in three sentences, is it really important to know that the French sunk the Rainbow Warrior?

World Atlas is better used as a stimulus for research than as a reliable work of reference. And it comes on two disks, which means if you don't have a second drive you'll be doing an awful lot of disk-swopping.

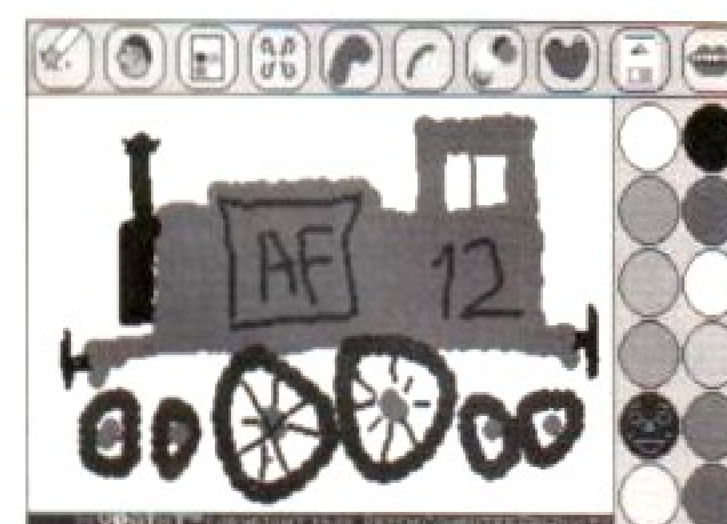


MYPAINT PRISM COMPUTER PRODUCTS £34.95

Or 'My First Paint Program', as it might well have been called. This is an excellent little paint program, presented using large, friendly, colourful icons. Basic drawing functions are thin or thick lines from a palette of 12 colours, fill, symmetrical drawing, palette cycle, a rainbow brush, undo and clear screen. Pictures can be saved to disk in IFF format, although the save system is a tad fragile.

A special feature is the host of line drawings that can be loaded in from disk. These can appear as a 'surprise' picture, slowly revealed as the user paints over the screen, or can just be slung on screen ready to be coloured in. Each is accompanied by an excellent sound sample – the song of the whale is particularly impressive to listen to!







Conclusion

Paint packages are notoriously good starting-points for kid computerists – they help develop mouse control, disk usage, icon systems and the like in a very friendly way, while having just as much 'fun' appeal as a piece of paper and crayons. *MyPaint* is an excellent product all round: it manages to be a 'kiddy' program that delivers the ease of use, the interest and the entertainment a kiddy version should have. The only problem is long-term interest. Once all the piccies have been coloured in, a 12-colour paint package is never quite as flexible as using real paint, or as physically enjoyable as splashing paint around. Still, this is good, clean, creative fun.



All the programs reviewed here are available at the prices quoted from ESP, 32a Southchurch Rd, Southend-on Sea, Essex SS1 2ND, tel 0702 600557. ESP also produce a catalogue with details of around 50 educational programs that they supply. ■

KEY SOFTWARE

24 HR HOTLINE 0407 50609

NEW TITLES SENT DAY OF RELEASE

1 UPPER PARK STREET, HOLYHEAD, GWYNEDD LL65 1HA

IMMEDIATE DELIVERY OF STOCK ITEMS BY FIRST CLASS POST

GAMES

688 Attack Sub	£16.75
After the War	£13.75
Anarchy	£16.75
Batman the Movie	£16.75
Battlehawks 1942	£16.75
Battle of Austerlitz	£16.75
Battle Squadron	£16.75
Beach Volley	£16.75
Betrayal	£16.75
Beverly Hills Cop	£16.75
Black Cauldron	£16.75
Black Tiger	£16.75
Bloodwych	£16.75
Bloodwych Data Disk	£9.90
Boxing Manager	£13.75
Bridge Player 2150	£19.90
Cabal	£16.75
Carrier Command	£16.75
Chambers of Shaolin	£16.75
Castle Master	£16.75
Chase HQ	£16.75
Chicago 90	£13.75
Chessmaster 2100	£16.75
Chrono Quest 2	£19.90
Cloud Kingdoms	£16.75
Colorado	£16.75
Colossus Chess 10	£16.75
Combo Racer	£16.75
Conflict in Europe	£16.75
Conqueror	£16.75
Crackdown	£13.75
Cyberball	£13.75
Damocles	£16.75
Dan Dare 3	£13.75
Darius	£13.75
Dark Century	£16.75
Defenders of the Earth	£13.75
Double Dragon 2	£13.75
Dragons Breath	£19.90
Dragon Flight	£19.90
Dragons of Flame	£16.75
Dragons Lair	£31.90
Dragon Ninja	£16.75
Drakkhen	£19.90
Dr. Doom's Revenge	£16.75
Dungeon Master	£16.75
Dynamic Debugger	£16.75
Dynamite Dux	£16.75
Dynasty Wars	£19.90
Dyter 7	£16.75
Elite	£16.75
Emlyn Hughes Int. Soccer	£13.75
E-Motion	£16.75

GAMES

Escape from Robot Monsters	£13.75
Escape from Singes Castle	£31.90
F16 Combat Pilot	£16.75
F16 Falcon	£19.90
Falcon Mission Disk	£13.75
F19 Stealth Fighter	£16.75
F29 Retaliator	£16.75
First Contact	£16.75
Flimbo's Quest	£16.75
Football Manager + Exp. Kit	£13.75
Football man. World Cup Ed.	£13.75
Forgotten Worlds	£13.75
Full Metal Planet	£16.75
Future Wars	£16.75
Gazza's Super Soccer	£16.75
Ghostbusters 2	£16.75
Ghouls 'n' Ghosts	£16.75
Ghosts 'n' Goblins	£13.75
Grand National	£13.75
Gravity	£16.75
Gridiron	£16.75
Gunship	£16.75
Hammerfist	£16.75
Hotrod	£16.75
Hard Drivin'	£13.75
Heavy Metal	£16.75
Heroes of the Lance	£16.75
Highway Patrol 2	£16.75
Hillsfar	£16.75
Impossamole	£13.75
Infestation	£16.75
Indy Last Crus. Adventure	£16.75
Interphase	£16.75
International 3D Tennis	£16.75
Italy 1990 (U.S.G.)	£16.75
It Came from the Desert (1 meg only)	£19.90
I.C.F.T.D. Data Disk (Ant Heads)	£9.90
Ivanhoe	£16.75
K. Dalglish Soccer Match	£12.90
Kick Off 1 or 2	£13.75
Kick Off Extra Time	£6.90
Kid Gloves	£16.75
Klax	£13.75
Knightforce	£16.75
Knights of Crystallion	£19.90
Leisure Suit Larry 3	£27.90
Liverpool	£13.75
Lombard RAC Rally	£16.75
Lords of the Rising Sun	£19.90
Lost Patrol	£16.75
Magic Marbles	£12.90
Manchester Utd.	£16.75
Microprose Soccer	£16.75

GAMES

Midwinter	£19.90
Ninja Spirit	£16.75
Ninja Warriors	£13.75
North And South	£16.75
Oil Imperium	£16.75
Onslaught	£16.75
Operation Thunderbolt	£16.75
P47 Thunderbolt	£16.75
Pacmania	£16.75
Paperboy	£13.75
Pictionary	£16.75
Pipemania	£13.75
Pirates	£16.75
Player Manager	£13.75
Populous	£16.75
Populous Promised Lands	£6.90
Powerboat USA	£16.75
Pro Tennis Tour	£16.75
Rainbow Islands	£16.75
Red Lightning	£19.90
Rick Dangerous	£16.75
Rings of Medusa	£19.90
Risk	£13.75
Robocop	£16.75
Run the Gauntlet	£16.75
RVF Honda	£16.75
Scrabble De Luxe	£13.75
Seven Gates of Jambala	£16.75
Shadow of the Beast	£16.75
Shadow Warriors	£16.75
Sherman M4	£16.75
Shoot 'em up Construction Kit	£19.90
Sim City	£19.90
Sim City Terrain Editor	£6.90
Sleeping Gods Lie	£16.75
Sly Spy	£16.75
Space Ace	£31.90
Space Harrier 2	£16.75
Strider	£16.75
Stryx	£13.75
Stunt Car Racer	£16.75
Supercars	£13.75
Super League Soccer	£16.75
Super Wonderboy	£16.75
Swords of Twilight	£16.75
Tennis Cup	£16.75
Targhan	£19.90
Test Drive 2	£16.75
The Cycles	£16.75
Their Finest Hour	£19.90
Theme Park Mystery	£16.75
Time Soldier	£16.75
Tin Tin on the Moon	£13.75

GAMES

Toobin	£16.75
Tower of Babel	£16.75
Triad 3	£19.90
Trivial Pursuit New Begin.	£13.75
Turrican	£16.75
TV Sports Basketball	£19.90
TV Sports Football	£19.90
Twin World	£16.75
Ultimate Golf	£16.75
Untouchables	£16.75
Vigilante	£10.95
Warhead	£16.75
War in Middle Earth	£13.75
Waterloo	£16.75
Wayne Gretzky Hockey	£19.90
Weird dreams	£16.75
Wild Streets	£16.75
World Cup Soccer (Virgin)	£13.75
Xenomorph	£16.75
Xenon 2 Megablast	£16.75
Xenophobe	£16.75
X-Out	£16.75
Zak McKracken	£16.75
Zombi	£16.75

COMPILATIONS

AMERICAN DREAM £16.75
Hostages, Bubble Ghost, Operation Neptune, Super Ski.

EDITION ONE £16.75
Double Dragon, Xenon, Gemini Wing, Silkworm.

GIANTS £19.90
720, Rolling Thunder, Gauntlet 2, Outrun, California Games.

LIGHTFORCE £16.75
R-Type, IK+, Voyager, Bio Challenge.

MAGNUM 4 £19.90
Afterburner, Batman - Caped Crusader, Operation Wolf, Double Dragon.

PRECIOUS METAL £15.95
Crazy Cars, Zenon, Arkanoid, Revenge of Doh, Captain Blood.

WORLD CUP YEAR 90 £16.75
Kick Off, G. Lineker's Hotshot, Tracksuit Manager.

BUSINESS

Arena Accounts	£119.90
Devpac Amiga 2	£41.90
Hisoft Basic	£55.90
Home Office Kit	£99.90
K-Comm	£20.90
K-Data	£34.90
K-Spread 2	£41.90
Lattice C Vers. 5	£159.90
Mailshot	£17.50
Mailshot Plus	£34.90
Prodata	£55.90
Protext	£69.90
Publishers Choice	£69.90
SBA Cash	£55.90
SBA Xtra	£79.90
Superbase Professional	£174.90
Word Perfect	£159.90

EDUCATIONAL

Discover Chemistry	£13.75
Discover Maths	£13.75
Discover Numbers	£13.75
Discover the Alphabet	£13.75
Fun School 2 under 6	£13.75
Fun School 2 6-8	£13.75
Fun School 2 over 8	£13.75
M. Beacon Teaches Typing	£19.90
Micro English	£12.95
Micro French	£12.95
Micro Maths	£12.95

JOYSTICKS

Cheetah 125	£7.50
Cheetah Mach 1 Autofire	£8.50
Cheetah Starprobe	£10.95
Competition Pro 5000	£10.95
Competition Pro 5000 clear	£11.75
Competition Pro Extra	£12.50
Competition Pro Glo (Red or Green)	£13.50
Konix Navigator	£10.95
Konix Speedking Autofire	£8.50
Quickjoy 2	£7.50
Quickjoy 3 Supercharger	£9.95
Quickjoy 5 Superboard	£14.95
Quickshot 2 Turbo	£8.50
Sureshot Clear	£8.50

DISKS ETC.

BLANK DISKS
DOUBLE SIDED DOUBLE DENSITY

3.5" Box of 10	£7.90
3.5" Box of 20	£14.90
3.5" Box of 50	£34.90
3.5" (Sony) Box of 10	£14.50
3.5" (TDK) Box of 10	£14.50
5.25" Box of 10	£4.90
5.25" (TDK) Box of 10	£7.50

3.5" DISK STORAGE BOXES WITH LOCK

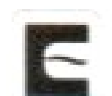
50 Capacity	£6.90
80 Capacity	£7.90
100 Capacity	£8.90
Disk Drive Cleaner 3.5"	£5.95
A500 Dust Cover	£4.95
A1000 Dust Cover	£4.95
Four Player Adaptor	£5.95

UK AND BFPO DELIVERY FREE, ELSEWHERE £2.00 / GAME FOR EXPRESS AIRMAIL
PLEASE MAKE CHEQUE/PO PAYABLE TO KEY SOFTWARE

ORDER FORM (PLEASE PRINT) *STATE CASS OR DISC*

GAME	COST
TOTAL	







NAME ....

ADDRESS ....

....

....

....

....

TEL .... AF 07/90

SEND TO: KEY SOFTWARE, 1 UPPER PARK ST., HOLYHEAD, GWYNEDD LL65 1HA

BUSINESS A SERIOUS

A SERIOUS Business

Part Three: Accounts

In the concluding part of our introduction to business software, **MARK SMIDDY** looks at accounting and offers timely advice.

ILLUSTRATION DANNY JENKINS

In business, accounts are vital. For many of us even the word 'accountant' conjures an image of a bespectacled little man working feverishly into the night, sweating over a voluminous, leather-bound ledger. The smoky atmosphere lit by a wilting candle: the silence disturbed only by the scratching of his fine quill upon the vellum.

Bringing this idea more up to date requires the paraphrasing of a recent television commercial: "You surprise me, Arthur. I know you're a wizard with your *soufflé à l' orange* – you may even be a genius with your sales projections and cashflow forecasts – but can you cook the books?"

A good set of accounts can mean the difference between a Caribbean vacation or a holiday at Her Majesty's pleasure. Despite what this may immediately imply, a well-produced set of accounts can save hundreds of pounds in accountancy fees – and thousands in tax. Lastly, modern accountants use biros.

Years ago, the sales pitch for computers included hackneyed phrases like "You can even use it to do your books", quotations used by people with about as much idea about financial book-keeping as a soya bean has about the Vegetarian Society. Thankfully, those days are long since gone; salespeople now admit Amigas are pretty good for playing games on. Accounts? You can leave them to the PCs. Or can you?

Since all computers rely on software, almost any computer can do the job – just how well depends largely on the quality of the software. As it turns out the Amiga, although not well served with accountancy packages, still manages to have a few tricks hidden up its disk drive.





SYSTEM 3
Digita £49.95

From those purveyors of low-cost software, Digita, who have had a reputation for producing good quality software at a keen price – on the PCW, that is. Many of their more recent offerings for the 16-bit market, however, have met with severe criticism. Apparently unperturbed by this, Digita continue to produce and support. Telephone support is offered five days per week at a cost of £25 per year – free for the first 60 days



LEFT: Setting up the company's details in *System 3.*



RIGHT: Adding a stock item in *System 3.*

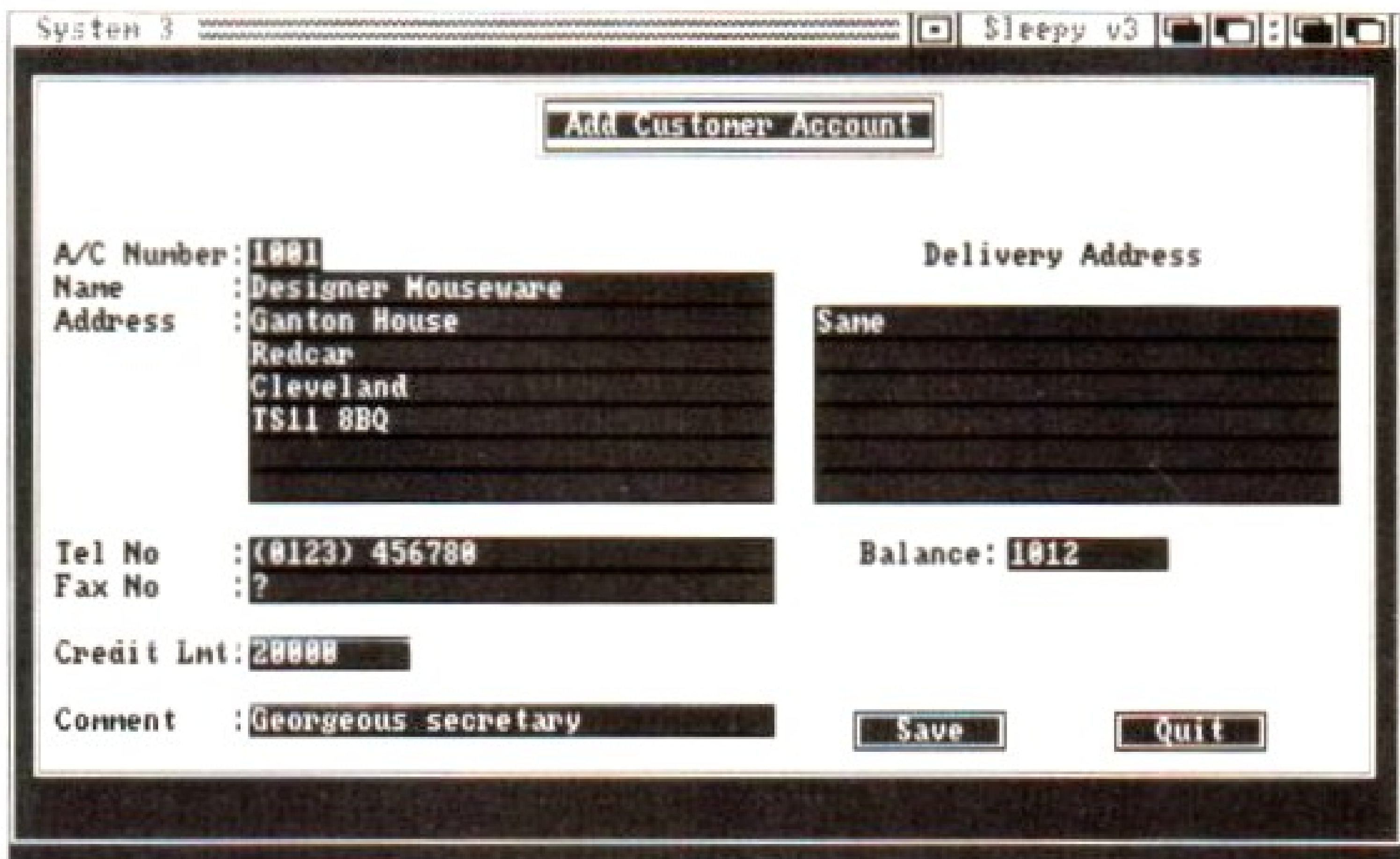


LEFT : Setting *System 3's* preferences.

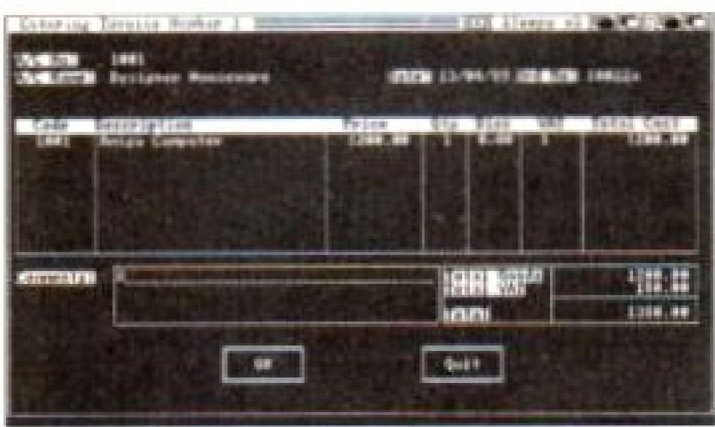
A SERIOUS BUSINESS



LEFT: Editing an invoice in *System 3.*



RIGHT: Adding a customer account.



LEFT: Editing yet another invoice.

after purchase. Digita's accounts package combination, *System 3,* is better than some previous offerings in that it does at least operate in a complete Intuition environment. The idea, and hence the name, is a system offering Sales Invoicing, Cashflow Control and Stock Control all in the one box. It comes on a single disk with 44-page manual. The software itself is split into two programs – one intended for the ledgers and the other for invoicing and stock control.



RIGHT: This customer owes too much!

The most notable feature of *System 3* is its ease of use. Even though the user interface is far from perfect – what is? – it remains surprisingly good. The only serious criticism is the inability to leave certain forms at any point. This can happen while entering an invoice, say and forgetting what the stock code is for a 1/8th" widget needlebearing – it is impossible to leave the form until a correct code is entered. This is a nuisance. That said, all the forms used by the program are remarkably well thought out.

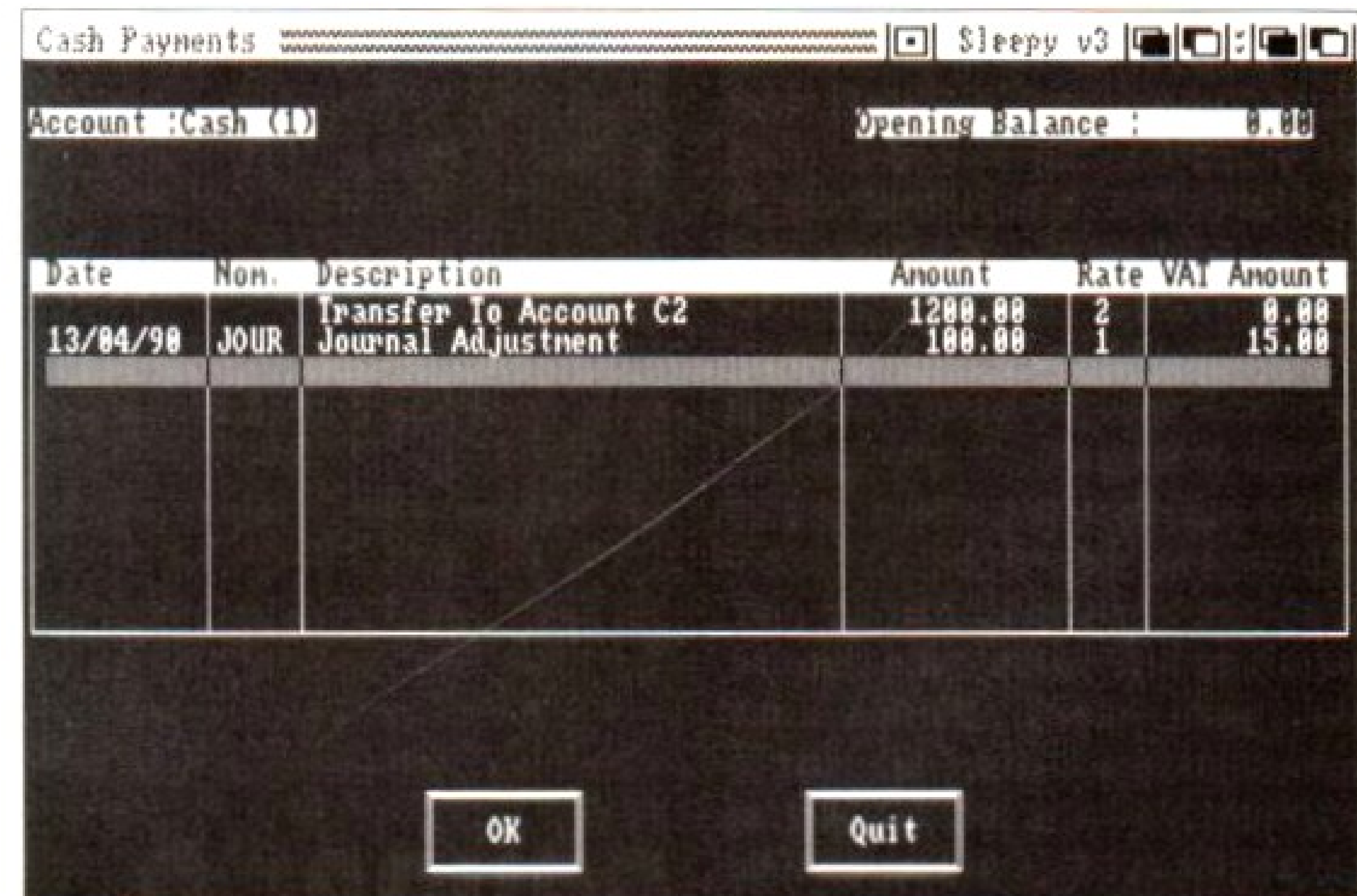
Like most Digita products, *System 3* is supplied with a minimal manual and no example data to get the new user going. However, the simplicity of the package should ensure most users get to grips with it very quickly. Some of the features, like the extensive reporting, quite belie its low price and the Digita name. Although capable of handling simple VAT, like the rest of the systems here, *System 3* is not geared for most retail outlets.

WEALTH WARNING

Putting too much faith in any computer accounts software can endanger your business. Less true today, perhaps, but when computers were in their infancy many profitable companies had to cease trading altogether – many more barely survived – solely because of computer errors. All too often the problems lay not with the computer system, but with the operators. There is a term which, although rarely used today, describes this people failure perfectly. 'GIGO' – Garbage In, Garbage Out.

The theory goes something like this: just suppose computers cannot make mistakes, a flawed assumption to start with. Operators are human and, like it or not, humans do make errors, however trivial they may be. Feed the perfect adding machine the WRONG set of figures (Garbage In) and the result will also be wrong (Garbage Out). Therefore, the results of any set of accounts are only as accurate as the data used to compile them.

The sad fact is, while we have an automatic tendency to mistrust the results of our own calculations, we tend to believe the computer's results regardless of how ridiculous they may appear. This often comes to light only when the Inland Revenue or Customs and Excise (who usually check by hand, incidentally) find errors in TAX or VAT returns. But just try explaining that to the magistrate...



ABOVE: Working on transfers between accounts in *System 3.*

3 1/2" BENCHMARK DISKS AND BOX OFFER

10 3 1/2" DS/DD + 50 Cap. Box	£10.95
20 3 1/2" DS/DD + 50 Cap. Box	£18.95
30 3 1/2" DS/DD + 50 Cap. Box	£23.95
40 3 1/2" DS/DD + 50 Cap. Box	£28.95
50 3 1/2" DS/DD + 50 Cap. Box	£33.95
20 3 1/2" DS/DD + 100 Cap. Box	£19.95
40 3 1/2" DS/DD + 100 Cap. Box	£29.95
50 3 1/2" DS/DD + 100 Cap. Box	£34.95
70 3 1/2" DS/DD + 100 Cap. Box	£44.95
100 3 1/2" DS/DD + 100 Cap. Box	£55.95

3 1/2" BENCHMARK DISKS DS/DD 135TPI

25	£15.95
50	£27.95
100	£49.95
200	£92.95
400	£177.95

Inc. Labels.

COLOURED BENCHMARK IN RAINBOW PACKS OF 5 COLOURS, RED, YELLOW, GREY, GREEN AND FOG WHITE.

25	£17.95
50	£34.95
100	£63.95
200	£117.95
400	£223.95

Inc. Labels.

All Benchmark Disks carry a lifetime warranty. If your data is important then buy Benchmark Brand.

3 1/2" UNBRANDED DS/DD 135 TPI

All disks 100% cert. & guaranteed

100	£44.00
200	£84.00
400	£160.00
600	£235.00
800	£302.00
1000	£364.00

Inc. Labels.

AMIGA DISK DRIVE

AMIGA 3 1/2" EXTERNAL DISK DRIVE 1 MEG (880K)

- FOR AMIGA 500 or 1000
- ON/OFF SWITCH
- THROUGH PORT
- QUIET MECHANISM
- SLIM CASE (METAL)
- 1 YEAR WARRANTY

OUR PRICE £64.50

DATA SWITCHES AND CABLES

2 way 36 pin Cent	£14.50
2 way 25 pin D-Type	£12.50
X Over 36 pin Cent.	£19.22
X Over 25 pin D-Type	£18.22

All lines switched.

Amiga Printer Cable 2 mtr.	£7.25
36-36 Cent m/m 2 mtr.	£8.25
25-25 D-Type m/m 2 mtr.	£7.25

All lines connected.

EXTRA LABELS 3 1/2"

100 3 1/2" LABELS	£3.50
500 3 1/2" LABELS	£10.00
1000 3 1/2" LABELS	£15.00

DISK BOXES

3 1/2" 50 CAPACITY	£5.25
3 1/2" 100 CAPACITY	£6.50

BOTH ABOVE INC. LOCK & DIVIDERS

3 1/2" 10 CAPACITY LIBRARY CASE IN PACKS OF 5	£4.75

MOUSE AND BITS

Replacement Mouse for Amiga	£19.99
Rigid Double Sided Mouse Pad	£4.50
Mouse Pocket	£2.50
Rigid Pad & Pocket together	£6.00

ACCESSORIES ETC.

2 Piece Universal Printer Stand	£6.75
14" Tilt & Turn Monitor Stand	£14.50
Printer & Monitor Stand together	£18.25

ALL PRICES INCLUDE VAT & P&P. UK ORDERS ONLY

MCS

Cheques and Postal Orders to:   24 HOUR ORDERLINE 0597 87784

Manor Court Supplies Ltd

OFFICE 9AM-5.30PM Mon-Fri

Telephone: 0597 87 792 Fax No: 0597 87 416

Dept AF7, Glen Celyn House, Penybont, Llandrindod Wells, Powys, LD1 5SY

EDUCATION AND GOVERNMENT ORDERS WELCOME

SOFTMACHINE

AMIGA HARDWARE

AMIGA 500 FLIGHT OF FANTASY

F29 Retaliator
Rainbow Islands
Escape from the Planet of the Robot Monsters
Deluxe Paint II
£374.99

AMIGA 500 BATMAN PACK

Batman – The Movie
New Zealand Story
Interceptor
Deluxe Paint II
£374.99

AMIGA 500 CLASS OF THE 90's

Superbase Personal
Maxiplan 500
Publishers Choice
Dr T's Midi Recording Studio
Amiga Logo
BBC Emulator
Deluxe Paint II
Midi Interface
10 Blank Disks
Disk Wallet
Mouse Mat
£374.99

SOFTMACHINE STARTER PACK

Mouse Mat
Mouse Bracket
10TDK MF2DD Disks
80 Capacity Disk Storage Box
3.5" Head Cleaner
A500 Dust Cover
ONLY £25*

*When purchased with any Amiga computer...Offer limited to 1 starter pack per Amiga purchased

Amiga 500 + A1084S	£624.99
A590 20Mb Hard Drive	£379.99
A501 Ram Exp/Clock	£94.99
A520 Modulator	£24.99
MPS1230 Printer	£144.99
A1084S Colour Monitor	£259.99
A1900M Mono Monitor	£99.99
A1011 Disk Drive	£94.99
A1352 Mouse	£34.99
A2000	P.O.A.
A2000 + A1084S	P.O.A.
A2010 Internal Drive	P.O.A.
A2090 20Mb Hard Drive	P.O.A.
A2093 20Mb A/boot Drive	P.O.A.
A2095 40Mb a/boot Drive	P.O.A.
A2092 20Mb MS-DOS Drive	P.O.A.
A2088 PC-AXT Bridgeboard	P.O.A.
A2286 PC-IAT Bridgeboard	P.O.A.
A2058 Ram Expansion	P.O.A.
A2620 68020/68881	P.O.A.
A2300 Genlock	P.O.A.
A2032 PAL Comp Vid Card	P.O.A.

PERIPHERALS

0.5Mb Ram Exp/Clock	£69.99
1Mb Ram Exp/Clock	£194.99
Cumana 1Mb 3.5" Drive	£71.99
Vortex 40Mb Hard Drive	£499.99
Hitachi Camera & Lens	£219.99
Digiview 4	£124.99
Vidi Amiga	£97.99
Colourpic	£435.99
Rendale 8802 Genlock	£191.99
Omega Midi Interface	£29.99
Cherry A3 Tablet	£464.99
Linnet Modem	£144.99

STAR PRINTERS

Star LC10	£169.00
Star LC10 Colour	£215.00
Star LC24-10	£249.00

SOFTWARE

WORD PROCESSING

Excellence	£136.95
Kind Words 2	£35.50
Pen Pal	£104.95
Protext	£69.95
Pro Write 2.5	£70.50
Scribble Platinum	£41.50
Transcript	£32.50
Word Perfect	£176.95

DATABASES

Acquisition 1.3	£169.95
K-Data	£35.50
Prodata	£56.95
Superbase Personal	£42.50
Superbase Personal 2	£69.95
Superbase Professional	£169.95

SPREADSHEETS

Advantage	£79.95
DGCalc	£28.50
K-Spread 2	£42.50
Maxiplan A500	£74.95
Maxiplan Plus	£112.50
Superplan	£112.50

LANGUAGE/COMPILERS/ETC

AMOS	RING
A-Rexx	£36.30
Argasm	£49.50
Aztec C Developer	RING
Aztec C Professional	RING
Benchmark Modula 2	£137.50
Benchmark Libraries	£72.50
Devpac 2	£43.50
GFA Basic V3 Compiler	£22.95
GFA Basic V3 Interpreter	£39.95
Hisoft Basic	£56.95
K-Seka Assembler	£35.50
Lattice C V5	£174.95

UTILITIES

A-Max	£134.95
A-Max with Roms	£249.95
Ami-Alignment System	£33.95
Amikit	£28.65
Ashas Caligrafonts	£47.75
Award Maker Plus	£32.50
B.A.D.	£32.50
B.B.C. Emulator	£39.95
Butcher 2	£28.65
CLImate	£32.50
Cross Dos	£24.95
Disk 2 Disk	£39.95
Dos 2 Dos	£39.95
Diskmaster	£39.95
Enhancer (WB 1.3)	£14.95
Facc II	£24.85
Family Tree	£32.50
Fancy 3D Fonts	£39.95
Goml V4.0	£28.65
Grabbit	£24.85
HiSoft Extend	£15.75
Interchange	£39.95
Interchange Objects 1	£17.25
I/change Mod V3D/FinF	£17.25
I/change Mod V3D/Turbo	£17.25
Kara Fonts	£55.35
K-Gadget	£21.95
K-Roget	£35.50
Lions Fonts	£47.75
Mac 2 Dos	£69.95
Mailshot Plus	£35.50
Masterpiece Fonts	£137.50
Newsletter Fonts	£24.85
Power windows V2.5	£55.35
Project D	£32.50
Quarterback	£47.75
Studio Fonts	£24.85
Superback	£41.95
The Calligrapher	£70.60
Ultra Card Plus	£74.35
X-Copy V2	£16.90

DESKTOP PUBLISHING

Home Office Kit	£116.65
Pagesetter V2	£78.95
Pagestream (USA)	£127.95
Professional Page	£193.50
PP Compugraphic fonts	£112.50
PP Structured Clip Art	£36.40
PP Templates	£36.40
Publishers Choice	£78.75

CAD/GRAPHICS/ANIMATION

Animagic	£62.95
*Architectural Design	£23.20
Board Master	£72.95
Caligari Consumer	£184.95
Can do	£101.95
C-Light	£39.95
Comic setter	£39.95
Comic Setter Clip Art	£17.25
Deluxe Paint III	£60.50
Deluxe Photolab	£53.15
Deluxe Print II	£38.55
Deluxe Video III	£59.95
Design 3D	£62.95
Digi Paint 3	£55.35
Digimate 3	£33.95
Draw 2000	£172.95
Fantavision	£32.30
*Future Design	£23.20
Graphic Starter Kit	£54.95
*Human Design	£23.20
*Interior Design	£23.20
IntroCAD	£47.75
Lights Camera Action	£51.55
*Microbot Design	£23.20
Modeller 3D	£62.95
Movie Setter	£39.95
Page Ripper + F/X	£69.95
Page Render 3D	£108.50
Photon Paint 2	£29.95

DESKTOP PUBLISHING

PIXmate	£39.95
Professional Draw	£108.75
Pro Video Plus	£193.50
Sculpt 3D XL	£119.95
Sculpt 4D	£367.45
Sculpt 4D Junior	£103.80
Start-up	£20.95
The Director	£47.75
The Director's Toolkit	£28.65
Turbo Silver	£108.75
TV Show V2	£57.50
TV Text Prof	£104.95
Video Generic Master	£55.35
Video Titler	£86.20
Video Wipe Master	£55.35
Videoscape 3D	£123.95
X-CAD Designer	£89.75
X-CAD Professional	£352.80
Zeotrope	£86.85

*state Sculpt or Videoscape

MUSIC

A Drum	£32.50
Audiomaster 2	£62.95
Bars and Pipes	£184.95
Deluxe Music	£53.15
Dr T's KCS	£154.50
Instant Music	£20.25
Music X	£184.15
Quartet	£37.50
Sonix	£51.55
Synthia	£74.70
Synthia Professional	£229.95
Track 24	£74.95

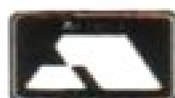
COMMUNICATIONS

A Talk III	£70.60
BBS PC	£93.50
K-Comm 2	£35.50
Ruby Comm	£54.65

ACCOUNTS

Arena Accounts	£140.95
Cashbook Combo	£49.50
Cashbook Controller	£34.95
Desktop Budget	£32.50
Final Accounts	£21.95
Home Accounts	£21.95
Personal Accounts Plus	£24.95
Small Business Accounts	RING
System 3	£34.95

Please ring for prices/availability on any hardware/software/peripherals not listed. (Full price list on request)



Please make cheques/postal orders payable to SOFTMACHINE. All items subject to availability. All prices include V.A.T. & Delivery. All prices subject to change without notice. E.&O.E.



SOFTMACHINE

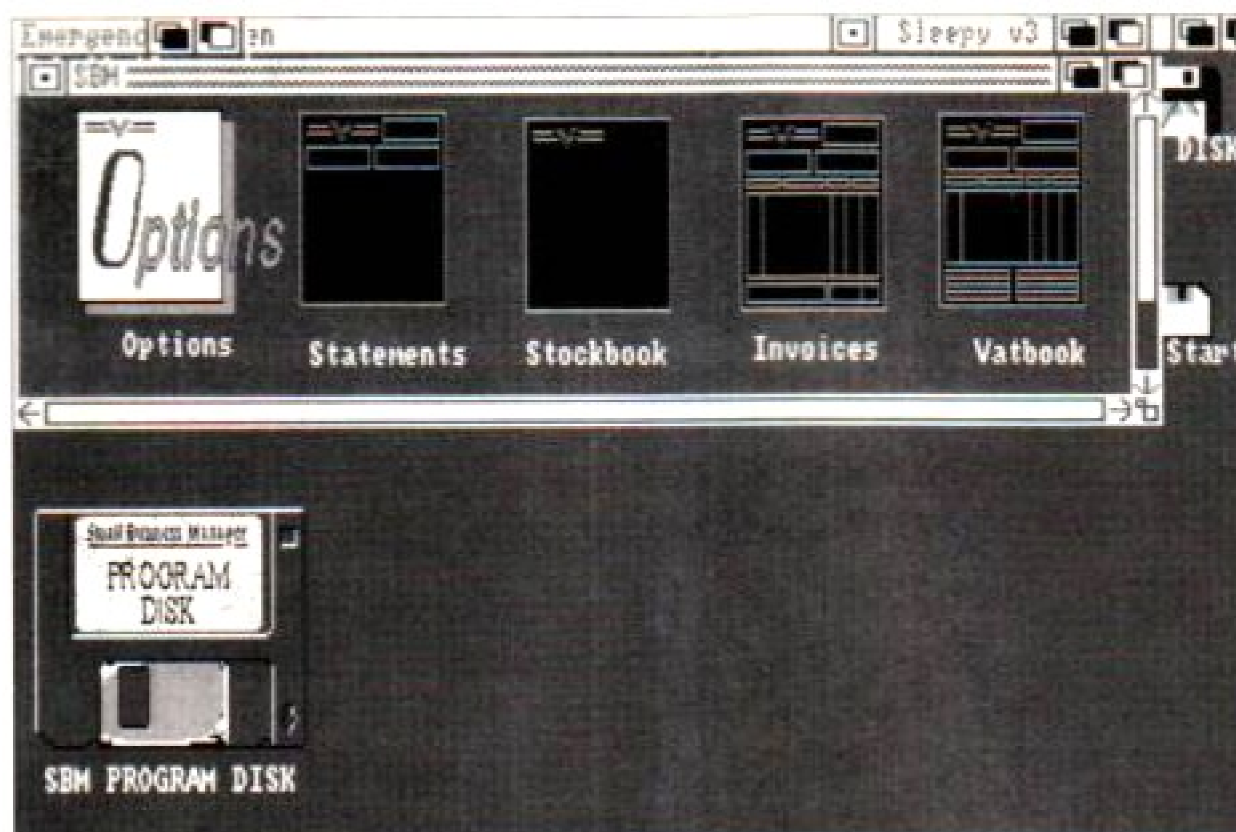
Dept. AMF 7, 36 Guernsey Road, Sunderland SR4 9RR. Telephone: 091 385 7426

SMALL BUSINESS MANAGER Hi-Tension £99.95 + VAT

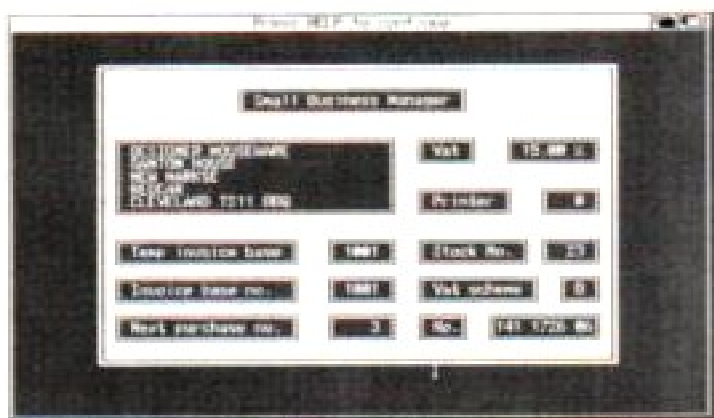
Comes from the Hi-Tension stable – programmed by none other than Steve Marriot of *Tipster* fame. *Small Business Manager* boasts a suite of programs, from stock control to invoicing and VAT returns.

It is supplied on two disks with an unusually-packaged manual – that is, when opened, the large cover forms a variation on the loose-leaf binder theme. More surprising still, the pages are only printed on one side – with a liberal smattering of "Page Intentionally Blank" messages. This results in an essentially small manual taking up space of almost biblical proportions. Cavils aside, this was the best thought-out manual. What it lacks is made up for by the tutorials – no less than 13 in all.

The first time *SBM* is started, it becomes apparent something is slightly odd. This is due to the use of the "Pearl" font to simulate the proper Intuition interface it lacks. Fundamentally there is nothing wrong with this approach – but it creates a program which looks like Intuition, but isn't! Problems arise when the user makes an error, and wants to go back to the previous box. Under Intuition this is as simple as a mouse click – no provision has been made for this eventuality in *SBM*.



ABOVE: The Workbench showing the modules.



LEFT: Setting the options in *SBM*.



LEFT: Viewing a stock list in *SBM*.



LEFT: A stock report.

The editor, too, is sadly rather crude. Proper menus have been provided but these seem to suffer from 'overzealous user syndrome'. Pushing the right mouse button too soon after a module loads can result in partial or missing menus! This minor irritation is remedied by a little patience.

The most striking feature of *SBM* is the way each module is a separate entity in its own right: data is shared among the programs as a common set of files. This should allow the system to run on even minimal configurations like an unexpanded Amiga 500. This removes the need for a multitude of menus just to get to the required section.

Additionally, inside each of the main modules is a facility to test the printer – a very handy tool. There is even a feature to draw very simple bar charts, but how useful this proves in practice remains to be seen.

Small Business Manager scores on ease of use and has a functionality that allows users to pick it up and start right away. What it lacks is the solid feel which reall ought to be present in any application of this type; something which may eventually prove to be its downfall. It has a lot to recommend it just on specification and price alone. Inevitably though, there remains a lingering doubt that it could do the job efficiently.

GLOSSARY OF TERMS

Accruals: Expenses which have been incurred but not yet invoiced.

Aged Creditors: List of purchases showing the ages of these accounts.

Aged Debtors: As above for debtors.

Audit: The examination of a company's books by an independent person (an accountant or auditor) who then makes a report of his findings. The Inland Revenue are more likely to believe professionally-audited accounts.

Audit Trail: List of individual transactions for an auditor to follow.

Bankrupt: Broke, out of dosh, skint and unable to pay existing debts in full. Big trouble!

Creditor: Someone the company owes money.

Co-operative: A company where a set of people take turns in doing allotted tasks. Where one day a person might be sweeping the floor, the next they could be managing the office. Co-operatives are not common today.

Debtor: Person or company who owes a company

Gross Profit: The amount of money made by a company - after deducting material costs.

Insolvent: Being unable to meet debts in full - although money is still owing to the company. *Compare Bankrupt.*

Invoice: Often called an account or a bill. Breakdown of services/goods bought, their cost and the total.

Limited Company: Limited companies are most people's idea of what a company is. Limited companies are owned by their shareholders - one or more financially interested parties. The company is run by a set of Directors. Classically, the idea of Limited companies implied "limited liability." This meant if the concern went into liquidation for some reason the directors where not personally financially responsible. This used to allow company directors to own fabulous houses, boats etc, while the company went quietly bankrupt. Those days are gone. *Compare PLC.*

Loss: An expense. Raw materials, service charges etc.

Net Profit: The amount of money a company makes after all taxes and other expenses have been deducted. *Compare Gross Profit.*

Nominal Ledger: A general purpose ledger for cash and cheque transactions.

Partnership: Two or more people running a company together. Most partnerships restrict themselves to two or three people. Often husband and wife or family teams. *Compare Sole Trader.*

Public Ltd Company (PLC): This is the same, although the company sell "shares" to anyone with money - such stocks are traded in the London Stock Exchange. PLCs are like all limited companies in that their accounts must be audited. *Compare Limited Company.*

Purchase Ledger: A ledger for all purchases made on credit.

Sales Ledger: Ledger containing all sales made on credit.

Shareholder: Person with "shares" in a private or public limited company. Shares are a form of investment - companies issue them as an alternative way to raise finance.

Sole Trader: The single man running a company as himself or trading under a banner: Steven's Newsagency, Dave Stevens etc. The important thing to realise is a Sole Trader is personally responsible for all their debts. Unlike limited companies, though, accounts do not have to be audited. *Compare Partnership.*

Sundry Debtors: The various people who owe your company money.

Turnover: The total amount of money to flow through a company during a set period. Often misunderstood, turnover is not related to profit. *See Gross Profit.*

VAT: Value Added Tax. Introduced around 1973 to replace the hideously complex purchase tax.

ARENA ACCOUNTS ARENA £149.95 + VAT

Is the most serious attempt yet to bring "business-like" software to the Amiga. Developed specifically with the Amiga in mind – thus boasting by far the best user interface of this bunch – *Arena* has the most professional feel. The most expensive package featured, *Arena* lacks features



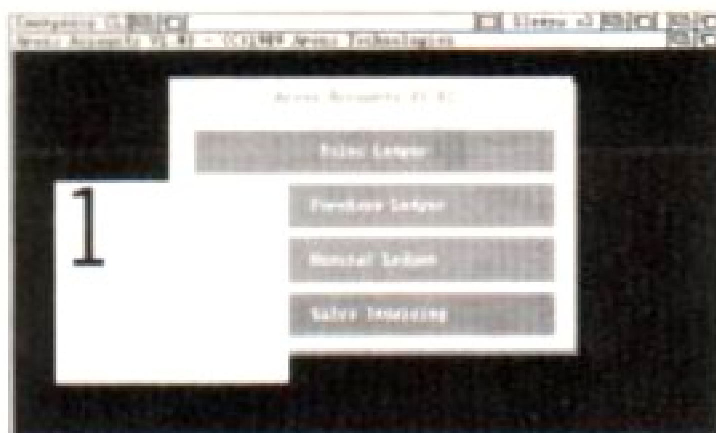


found in the cheaper *SBM*. However its implementation is far more professional, justifying the higher cost.

Sadly these first impressions do not extend to the documentation which, although sizable, does not do enough to accommodate the first-time accounts user. *Arena* is based on the frightfully complex (but powerful) 'double-entry book-keeping' system, which must be understood before attempting to use the package. Surprisingly, the manual does feature a reasonable introduction to the machine itself. This gives the impression that *Arena* is aimed directly at accounts-minded people, not Amiga users. This unusual approach is dubious: Amigas are seldom bought specifically for business use, PC compatibles being first (and obvious) choice.

Comments over the documentation aside, this is the only package which feels as if it means business. Although the system is very Amiga-specific in implementation it seems to have taken many ideas from PC-based packages. To this end, many of the data entry screens take on the impression of simple (and sometimes not-so-simple) forms.

Like *SBM*, *Arena* uses its own line editor – preferring it to the Intuition-supplied gadget. Far more refined than *SBM*, the system works well and is easy even for inexperienced users. The extra feature of copying the line above saves time when entering lists. Mouse control is available to an extent too. At some prompts the system offers a list of options when required data is omitted. Very helpful.



Unlike *SBM*, *Arena* prints to existing stationery. This is a far better system in the long run because it removes the need to reprint a new set of invoices, statements, letterheads and so on, just to aid the computerisation. In the short term this does mean the package must be customised to meet the peculiarities of the business's existing printed forms.

If criticism has to be made of *Arena Accounts* it would be of the 'front end' menu design. So many of the menus look so similar, it is often difficult to tell at a glance exactly which one is current.

One further objection would be with the odd system of needing to assign images before running the software. Overall, though, if the manual's tutorial content were improved – and a decent glossary were added – the program would be hard to beat. Unfortunately, *Arena Accounts* only runs on Amigas with *at least* 1Mb RAM.

Soft Conclusions

When the final arithmetic is done it is difficult to pick a clear winner from the top two packages. *Small Business Manager* has the price advantage, customised stationary and the addition of stock control. *Arena Accounts* looks more business-like, has far superior input validation – thus reducing the risk of errors – and feels more solid. Neither system can cope with the special VAT schemes for retail outlets, necessitating the final computation be done manually. This is almost unheard of even in simple PC-based packages – but not a major problem, nevertheless.

At the bottom end, only *System 3* is worthy of consideration. It is not geared for a larger small businesses with high turnover of stock, but could be useful for the small manufacturer. However, it is not a complete accounts package by any means – nor does it pretened to be one.

ABOVE LEFT: The options available within *Arena Accounts*.

FAR LEFT: Adding nominal ledger codes in *Arena Accounts*.

LEFT: Adding customer accounts

UP TO SCRATCH

Several other "accounts" packages were submitted for inclusion in this feature, but after some consideration (and much soul-searching) they were omitted because they did not cut the financial mustard. They shall, of necessity, remain unnamed. Take note: even a low-cost item is expensive if it cannot do its job efficiently.

BELOW: Picking an account code from a list in *Arena Accounts*.



WHO NEEDS COMPUTER ACCOUNTS?

The software is readily available, but is it strictly necessary? Is it better than a paper office? The following findings are based on true figures and genuine people (some details have been altered to maintain anonymity).

UNDER £50 SOFTWARE

The Well Cool Blinds Co
Proprietor: Paul Hardacre
Type of Business: Venetian Blind Distributor
Type: Sole Trader
Classification: Trade/Retail
VAT Reg: Yes

Paul's new business has been running for a little under eight months, but has generated enough turnover to push it into the VAT bracket. Already the fledgling company has won contracts for installation and maintenance as far afield as London and Glasgow. Something of an entrepreneur, Paul already has another four separate businesses, each with its own set of books. Should he computerise – and at what cost? Take a closer look at what might seem the perfect case for a computerised accountancy system.

The business employs Paul and one YTS trainee; turnover for the last quarter was just under 10,000. The bookkeeping system started in exercise books but has necessarily outgrown them to the classic Simplex printed sheet system.

Paul's existing accounts system is simple. Invoices are issued to clients at point of sale; Paul retains one copy, the customer keeps the other. Paul inserts the copy invoice into a loose-leaf folder where it remains until paid. This means the invoices are automatically chronologically ordered with the most recent at the back. A quick glance is all that is required to determine whether an unpaid debt is overdue. He maintains a similar system for his creditors. One week's books can be completed in around 25 minutes and the quarterly VAT return calculated in around one hour.

Conclusion

To computerise would only confuse matters. Paul is not computer or

accounts minded and would, therefore, have to learn the jargon. Furthermore, this would entail keeping two records of all transactions – one on computer, one for his existing filing system. This would take time.



Bob's Burger & Bistro.
Proprietors: Robert and Penny Davidson
Type of Business: Cafe/Bistro
Type: Retail
Classification: Partnership
VAT Reg: Yes

Bob and Penny are partners in their family business, based in a medium-sized town on the North East's Riviera. They specialise in producing charcoal-grilled beefburgers during the day and more specialised bistro-type meals on evenings. This successful enterprise has been established for several years despite stiff competition from a worldwide American Hamburger firm. As well as the partners, the business employs one full-time waitress and several part-time staff. Trading turnover for this business is projected at 100,000. Although not detailed here, Bob also runs three medium-sized supermarket franchises – this has been included in the analysis, though.

SUPPLIERS:

Arena Systems: 0724-853481
Digita International: 0395-270273
Micro Retailer Systems Ltd: 0625 615375
Hi-Tension: 0252-344454

THANKS TO THE FOLLOWING:

• George Vyner Ltd: (0484) 685221 – for permission to reprint extracts from their Simplex D and Simplex VAT books.
• Catharine Gidney and HM Customs and Excise for advice.
• The small business "guinea pigs" for kindly allowing the author to pore over their accounts.

Like Paul, Bob runs his accounts through a Simplex system. He keeps two sets of books, one for the supermarkets and one for the bistro; the VAT is noted in one master book as an amalgamation of both businesses' VAT records. For VAT purposes, everything sold by the bistro attracts 15%, except the salad buns sold during the daytime. Since the business only employs one permanent member of staff, the payroll is relatively simple.

CONCLUSION

This business deals in a lot of small items prepared from various foodstuffs so there is a case for some kind of computerised stock control. Bob disagrees. His necessary stock control is a "quick peek" into the three industrial chest freezers where perishable items are kept. Since fresh foodstuffs have a fast turnover, and limited life, this is all that is required. A trip to the cash-and-carry is a once weekly affair – Bob judges stock levels by experience. Some suppliers even contact him and deliver free.

The accounts are a very simple matter. The week's takings can be balanced in a Simplex book in under an hour. The quarterly VAT return is calculated similarly. Bob would not need an accounts system for the same reasons as Paul. Also, as he states, "A Simplex book costs about £10 per year. An accounts package costs, say, £125. I'd have to sell a lot of burgers to recoup the extra £115!"

YOU AND THE LAW

The law requires any business computerising its accounts system, in part or in full, to register this fact with the appropriate bodies: Customs and Excise for VAT and Inland Revenue for Income Tax. The software must also be approved, because VAT officials want to know the computer is not cheating them! It is believed all the systems reviewed here have been approved – it is the duty of the software companies to do this.

The situation is similar for anyone needing to store customer information on computer file – customer and supplier names and addresses, for example. This comes under the 1984 Data Protection act – see also *Amiga Format* Issue 10, Page 100 – Databases.

More important is what happens when either the GIGO principle or Murphy's law takes effect – that is to say, if a bug in the software or a simple entry error causes an error on a VAT return. Who is responsible? The official stance is predictable. A spokesman for Customs and Excise told *Format*: "It is up to every trader to make accurate returns". In a nutshell, the business (and, therefore, the manager) is solely responsible for the accuracy of computer-processed figures.

When mistakes are spotted it is up to the company to rectify them. If VAT has been underpaid C & E will usually require the amount owing to be repaid, in full, immediately. If, on the other hand, VAT has been overpaid, getting it back can be a time-consuming business. This sort of error is not uncommon – and often means large amounts of capital being tied up for many months.



ASEAN Medical PTE Ltd.
Managing Director: Charles Durning
Type of Business: Medical Supplies (Hardware)
Type: Limited company
Classification: Imports Distribution VAT Reg.: N/A

ASEAN Medical is a small/medium sized company based in Singapore. It imports medical hardware from companies across the world and sells them directly to hospitals, doctors and so on. In addition to the founder, Durning, the business employs three other directors and an accountant – referred to as Financial Director. Trading turnover for the last financial year approached £500,000.

This company was chosen as an example because it operates on a finely-balanced system of stock control. In fact, ASEAN Medical rarely keeps any stock items except small, quick turnover goods. Most others are sold BEFORE they are actually bought, reducing warehousing costs to a minimum. It also trades in a market excessively sensitive to fluctuations in world exchange rates. Durning's profits are, therefore, reliant on his ability to quote a price in, say, Singapore dollars and buy equipment from Britain while the pound is weak.

The book-keeping task is split between Durning who completes the daybooks, sales and purchase ledgers – and the accountant who maintains the rest. He keeps up with the ever changing rules in local business tax etc.

CONCLUSION

This is a company whose sole trading profit relies on the ability of one man's experience to predict the money markets and buy at the right price. Computerisation would be an advantage if the system could be linked directly to the stock market. This company could foreseeably benefit from an accounts package to simplify the accountant's task and relieve Durning of some of the work. The two could exchange and maintain data more easily using floppies – or, more realistically, a networked system.

Revelations

From these examples it is easy to see how a small business can manage perfectly well without a computer doing the accounts and/or stock control. Such systems come into their own when the stakes are greater – trading turnover exceeding half-a-million, for instance. It should be noted also, the computer does not necessarily ease the task or relieve one person entirely. It is useful when:
a) A department looks after a company's financial affairs.
b) Several people need to examine and alter the data.
c) The business is primarily mail order of small items.

It is true to say, many businesses can benefit from this sort of system – but most would be well advised to think very carefully first. Discuss the matter with an accountant and listen to the reply. Many can relate the unfortunate – and all too common – stories where the computer ends up in the bin and the business in bankruptcy court!

Amigas, like all computers, are tools. Used correctly, they can enhance profits and streamline the business. In the small business they are best kept for mailing lists, stock control and forecasting. In the slightly larger business – one employing 10 or more people – they are useful for wages and indeed, accounts, *if* someone is employed to operate the system. But the small businessman will profit by staying with what he knows best – making money. ■

THE AMIGA 500 PC/XT IS HERE



RUN PROFESSIONAL
MS DOS SOFTWARE
ON YOUR AMIGA 500
AT A PRICE YOU CAN AFFORD

KCS POWER PC BOARD

WHY DID YOU BUY AN AMIGA 500?

Of course, because of its superb graphics, music and animation capabilities. However if you want to get serious, you soon realise that it is distinctly lacking in memory and professional software.

Well - They Said It Could Never Happen - But It's Here At Last!

You! In your own home can transform your Amiga 500 into a real IBM compatible **PLUS** up to **ONE AND A HALF MEGABYTE** Amiga memory expansion.

It's simple - No screwdriver, no soldering iron and no technical knowledge required. Just turn your Amiga over, open the cover, slide the Power PC Board into the connector, close the cover and your Amiga PC/XT is ready. (In other words, no loss of guarantee)

You are now ready to use a wealth of professional MS DOS software at speeds faster than a PC/XT (ind. review), **and in colour,** with compatibility thanks to Phoenix-Bios.

You can also rely on the correct date and time at any moment in Amiga and MS DOS mode (with the aid of a battery pack).

- ★ Video support: monochrome, Hercules and Colour Graphics Adaptor (CGA) (4 and 8 colours)
- ★ Disk support: internal 3.5" external 3.5" external 5 1/4" drive. (Software-upgrade to H/D A590 in pipeline)
- ★ Including MS DOS 4.01, MS DOS shell and GW Basic (market value approx £130.00)
- ★ Including English Microsoft books + KCS manual + FREE software
- ★ Further exciting software upgrades in the pipeline
- ★ Available memory: 704KB + 64KB EMS in MS DOS mode, 1 megabyte + 512KB RAM (disk) buffer in Amiga mode
- ★ No extra power supply necessary thanks to the most modern CMOS and ASIC technology
- ★ OK with TV. No special monitor required
- ★ Price: **£320.00 including VAT. Access and Visa accepted.**
- ★ For export price please contact us
- ★ Trade enquiries welcome (UK - Scandinavia - Australia/NZ and all English language.)

First deliveries expected in May. Place your order now and get into the queue. Don't send any money yet. We will contact you when we are ready to ship.

Compatibility is excellent, but no-one can guarantee every single program available therefore if your purchase depends on a particular program, please ask us first or send in a copy of the program. (With suitable S.A.E if to be returned). Price subject to change without notice.

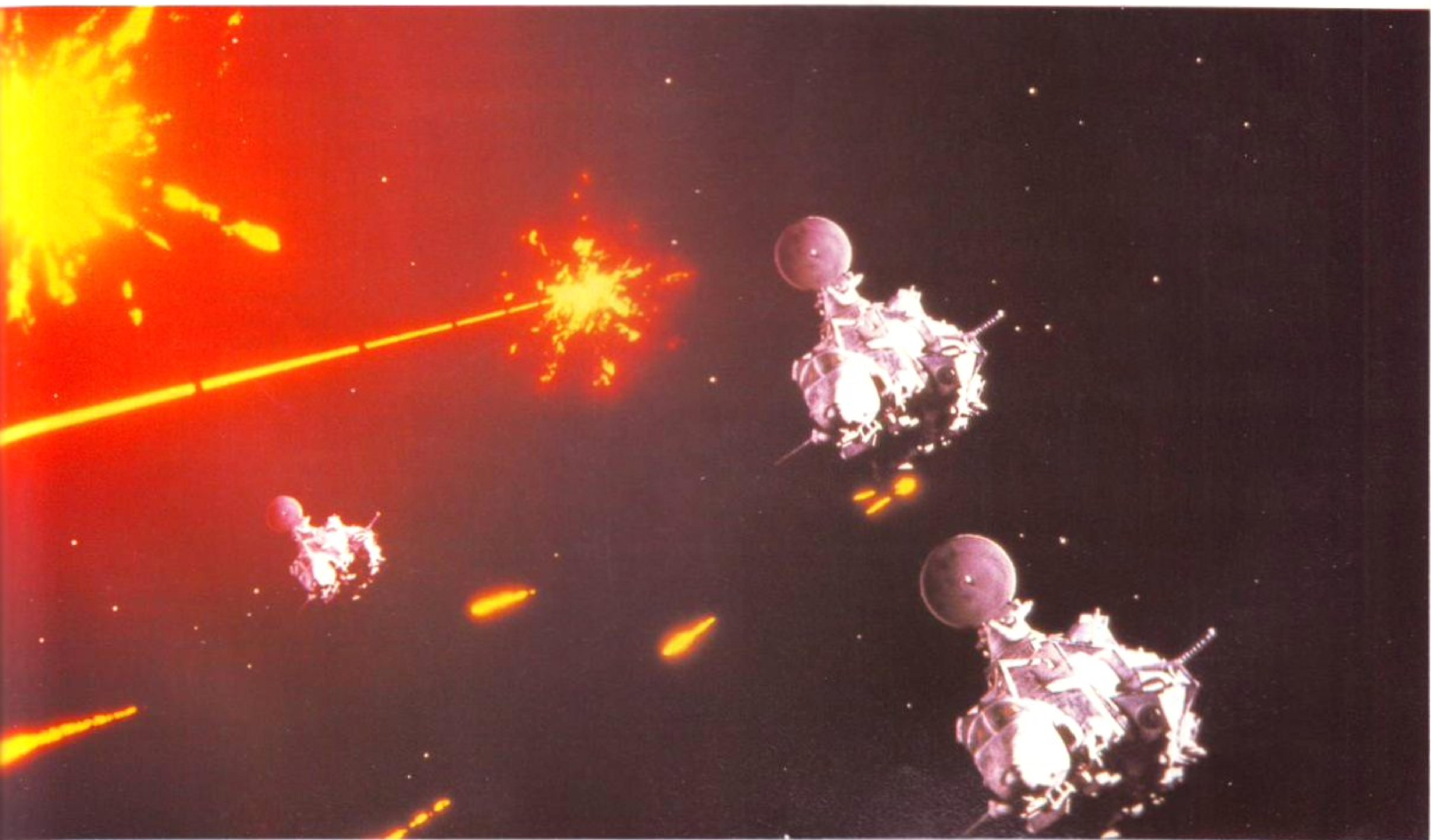
BDL

BITCON DEVICES LTD.
88 BEWICK ROAD, GATESHEAD,
TYNE & WEAR, NE8 1RS ENGLAND.
Tel: (091) 4901919/4901975.
Fax: (091) 4901918

THE WHOLE TRUTH ABOUT
games programming
PART 5

Collision detection

The *Menace* code is nearly complete, becoming playable as **DAVE JONES** adds the bump-into-things routines.



This month sees all of the game coming together – and now being playable! – with the inclusion of the collision detection routines.

There is normally some form of collision detection performed in all games – one object moving into another object is a very common occurence that normally has to be detected. *Menace* required the following collisions to be identified:

- Player ship to aliens
- Player ship to foreground (expert mode and guardian)
- Weapons to aliens

These three are really all that is required in *Menace*. The first two of the above are very simple thanks to the Amiga hardware and the way *Menace* was designed.

Remember that the player's ship is a hardware sprite. The Amiga has the ability to detect collisions between any of the harwdare sprites and any bit plane(s) we specify. In the dual playfield mode that *Menace* runs in, bit planes 1, 3, & 5 form the back playfield, with the even planes (2,4 & 6) forming the front playfield. The aliens are drawn into the back playfield (planes 1,3 & 5) so we want the hardware to detect when the hardware sprites that form the ship collide with pixels in these planes.

A problem springs up here, though, in that the actual background graphics would register a collision as these completely fill up planes 1 and 3 – being four-colour, they only require two planes. Plane 5 is, however, untouched by the background graphics and will ONLY contain data from the actual aliens. So rather than detect a hardware sprite collision between planes 1, 3 & 5 we will only detect a collision to plane 5.

You may notice a small quirk here in that only checking the third plane in the alien graphic data will not be very effective if the alien used very few colours that have bits in the third plane set. In reality all of the aliens in *Menace* used mainly the colours that are included in the third plane set (colours 4, 5, 6, & 7) as these were redefinable for each alien. The background colours (0,1,2 & 3) were very rarely used in the aliens themselves.

Hardware Registering

The hardware register that controls the sprite-to-playfield detection is called CLXCON. This lets you select which bit planes to detect, and the value to detect (normally 1 for a set pixel). All that happens is that a mask of the ship is ANDed with the bit plane data. This will only register a collision when two bits overlap, which is indicated in the CLXDAT register.

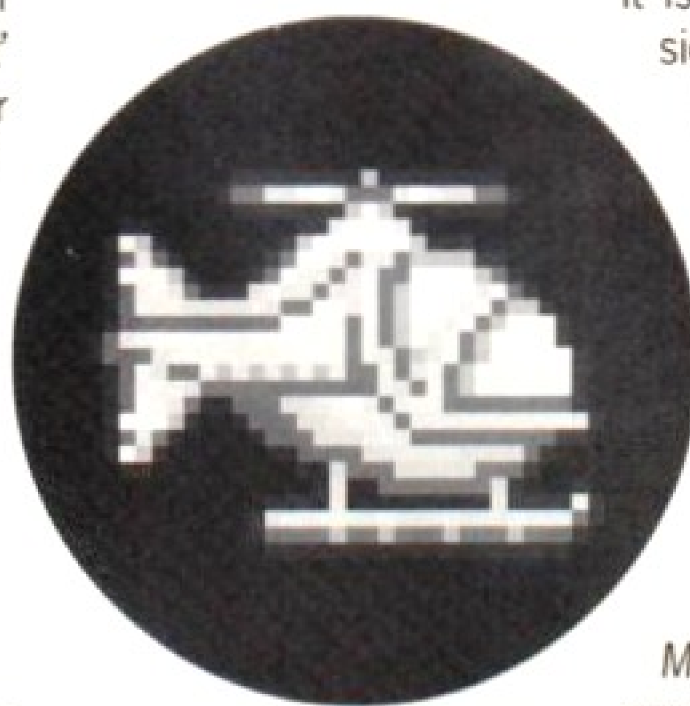
This is simply a hardware implementation of a commonly-used software routine where an object's mask is ANDed with a screen mask to check for a collision. This type of detection is termed 'pixel perfect' detection as just one pixel of your ship hitting a single pixel of an alien will be detected. Many games use other methods of detection that are sometimes a little crude. How many times have you heard the shout 'No way I was dead, I was miles away from that bullet, stupid ✲◆✱✲✲■✲ game!'.

Ship to Foreground

The ship to foreground collision detection was handled simiarly, with a collision between plane 6 and the ship being registered. Initially I registered collisions between planes 2, 4 & 6, all of the foreground planes. This then exhibited a quirk because the ship missiles are drawn into the foreground playfield. If the ship had quite a few speed-ups you could fly over some of your own slower-moving missiles – and then you lost energy!

Obviously not a desired effect, so the solution was to only draw the missiles into planes 2 and 4, and collision detect only to plane 6. This gave quite a lenient feel to the foreground collision detection as colours 0,1,2 & 3 in the foreground graphics would not register a hit. There was many a sprinkling of the other colours in the graphics, though, so the effect was not too noticeable.

As a hint, if you want to see the sort of effect that using only a single plane of some graphics would have in collision detection, load your graphics into *Pixmate* or *Butcher* (image processing programs) and switch off the bitplanes you will not be using. This gives you a visual indication of just what is going to register a hit. It also gives you the opportunity to swap a few of the colours around to get the best use from the single plane.



Being Generous

It is usually preferable to make collision detection 'generous'. This simply means that the player can stray into objects by a few pixels before a collision is detected. This is not possible to do if you are using the hardware collision detection, but is quite simple if you are implementing it in software.

Figure 1 shows the main sprite from Level One of *Blood Money*. Beside it is its collision mask. Rather than use the actual mask of the sprite, a new mask was stored that had a few pixels trimmed off around the edges. The blitter, rather than the hardware method, was used to AND this mask with a plane of the screen.

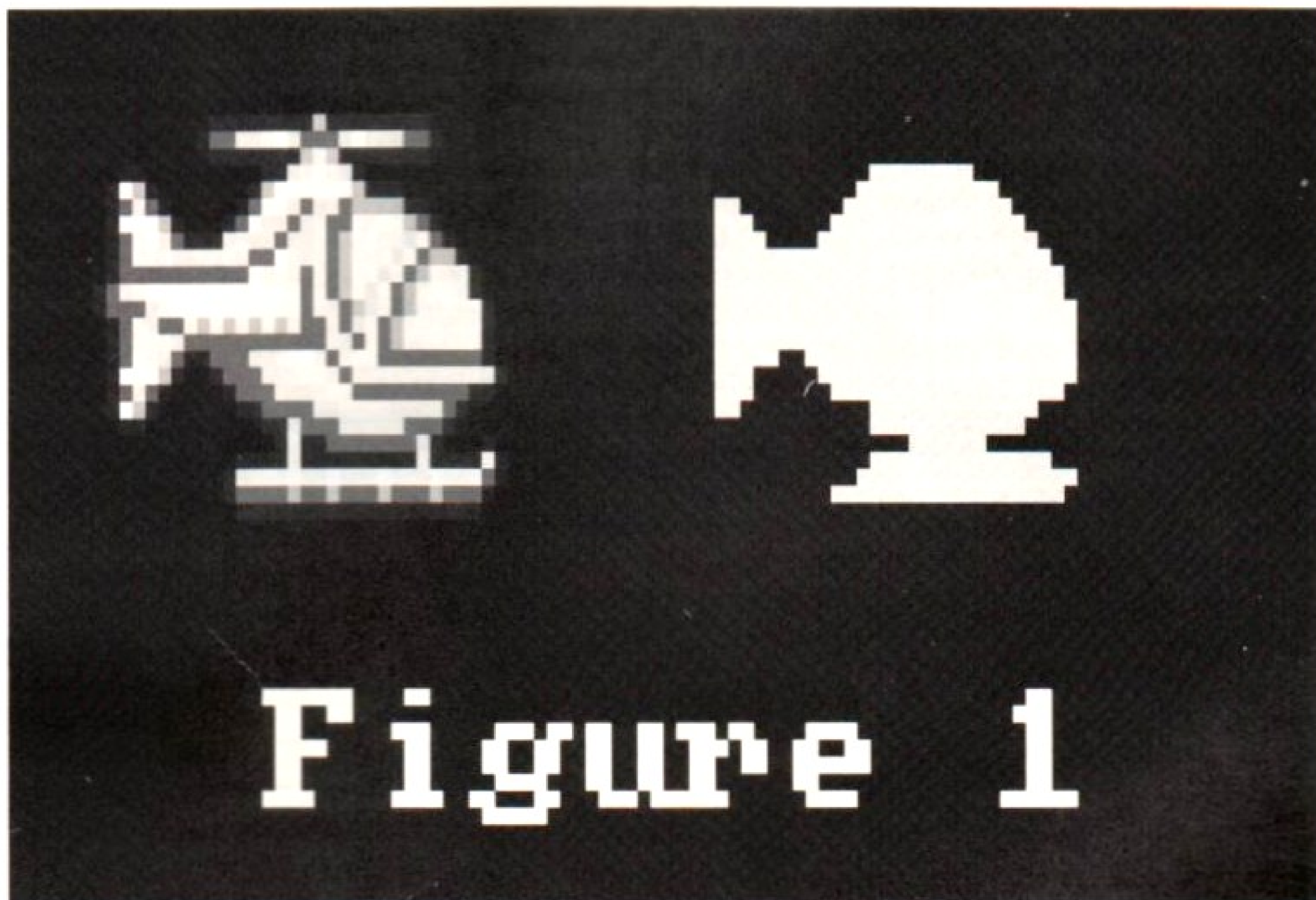
This allowed certain parts of your helicopter (note in the diagram the blades have been removed) to enter the side walls with safety. This allows a little more skill into the game and eggs players on to have a go at squeezing through tight spots.

This method of collision detection has one major downfall. Although we may detect we have hit an alien, we do not know which one. For *Menace* this does not matter as the game was kept nice and simple, with collisions with any alien simply reducing your energy – the only exception being the bonus icon that you shoot and pick up. The bonus icon, though, can only appear on its own on the screen, so if we hit an alien during the bonus routine, it must of course have been the bonus icon.

Figure 1: The main sprite from *Blood Money* with its mask for collision detection. The mask is smaller and has no rotor blades, to encourage the player to squeeze through small gaps.

What hit What?

The last part of the collision detection, missiles to aliens, must be able to determine what particular missile hit what particular alien. This must be implemented using some



form of coordinate checking. This is the second main way to perform collision detection.

Coordinate checking can never be pixel perfect unless we checked every pixel coordinate in the missile to every pixel in an alien, which would require HUGE amounts of time and cause a game to crawl along. What normally happens is that a 'box' is defined within the two objects you are checking. A box only needs two coordinates, the top left and bottom right. If two boxes overlap then we flag a collision. You can see this is quite rough in that not many aliens appear as a box shape.

In *Menace* the missiles are quite small, so rather than define a box for each missile, only one coordinate at the tip of each missile was checked. If this coordinate entered the box of any alien then a hit was registered.

I made all the alien collision boxes 32 x 24 pixels in size, exactly the same as the alien size. This would appear to cause problems if the alien was quite small in size, not filling the entire box. Have a look at Figure 2. This shows a small alien with a missile entering its box, flagging a collision. But as you can see we would not want this particular case to flag any collision as the missile is quite far away for the actual alien itself.

One way around this would be to store a collision box size for each alien. The one in Figure 2 for example would suit a box of 24 x 18 better. This makes the calculation of whether a missile was in a box or not more lengthy, though, as we are not dealing with constant numbers. This may seem being picky but if we have 12 aliens flying around, and as you can have up to 18 different missiles active at once (missiles, laser, canons etc) this would mean checking every missile against every alien = 216 checks. This will be quite time consuming as there is a fair bit of calculation in each check.

Make it Simpler

What we need is a quick way to tell if a missile has hit ANY alien; if this happens we can then check for WHICH alien it has hit. Fear not, for this is quite simple to do.

What we need to do is combine the mask detection with the coordinate detection. We cannot use the Amiga's hardware detection for missiles to aliens as this only works with hardware sprites. The blitter can do a quick check for us, though.

The blitter has a bit called BZERO in the DMACONR register. This bit will be set true if the result of the previous blit operation is all zeroes. We therefore get the blitter to perform an AND operation between the mask of the missile, and plane 5, which only contains data from the aliens. If the BZERO bit comes back false, ie the result of the blit was NOT zero, then the missile must have collided with some alien data.

NOW we can perform the coordinate detection to find out which alien we hit. This also solves the problem in Figure 2, which would not now flag a collision because the mask detection would not flag a hit, so therefore the coordinate detection would not be then be performed.

When we perform the blit to AND the mask with plane 5 we switch off the blitter Destination channel. We do not want the blitter to draw the result of the blit, so it is pointless to have an area of memory to point the D channel to.

It is quicker and therefore more efficient to switch off the Destination channel for this blit. This is a handy feature of the blitter allowing us to combine a few channels in some way, but only being interested in whether the result was zero or not.

This method of performing the missile-to-alien collision will be considerably faster, even taking into account the blitter operation. On average only three out of the eighteen missiles would actually be hitting aliens. This reduces the coordinate checking to a lower level: only 3 x 12 = 36 comparisons.

Love Missile F-111

That, then, is all the collision required in *Menace:* ship to aliens, ship to foregrounds, and missiles to aliens. The source code for this month (on next month's disk) covers all this, along with the drawing of the missiles. There are four types of missile:

- Normal missile
- Cannon
- Laser
- Outrider

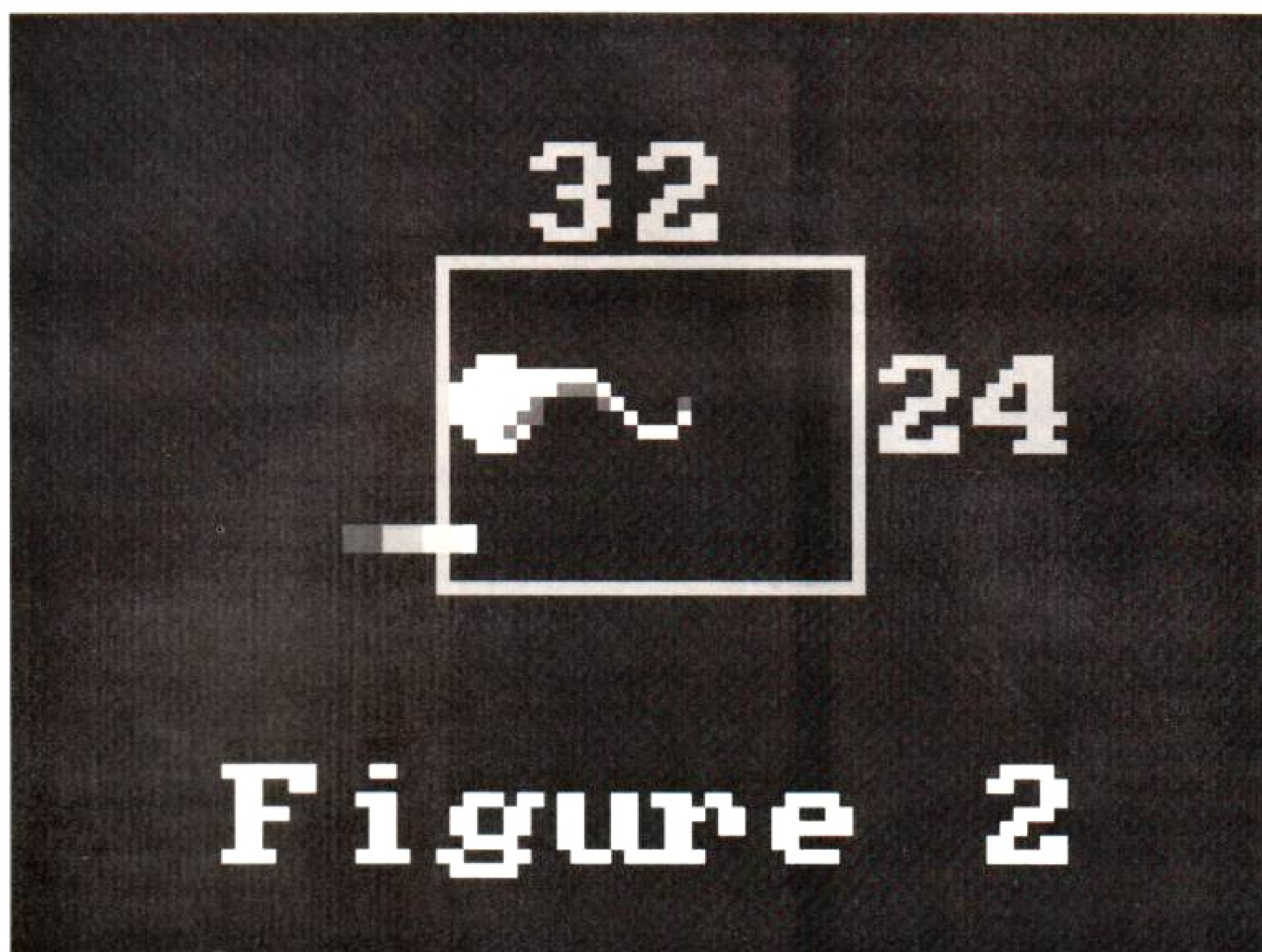


Figure 2: An alien from *Menace* is struck by a missile. If a standard-sized box is used to define the aliens' collision area, this rather small alien will be hit too easily. A smaller size of box is needed for smaller aliens.

All have different ranges and speeds. They all simply subtract one from an alien's hit number, but lasers are not killed once they have hit an alien – they carry on till the end of the screen – and are therefore more powerful. All other weapons are killed as soon as they hit an alien.

Graphically they are quite small (typically 16 x 4 pixels) and are just four-colour. The blitter is used to draw them into plane 2 and 4. Weapons in shoot-em-ups nowadays are getting BIG. If you plan on trying to write one, I would say the bigger the weapons the better for MEGA effects. There should be no difference in the collision detection, only in the extra time taken to draw bigger, badder weapons.

Completing the Code...!

Sadly, there was no space for the code on this month's Coverdisk, but watch out for it next month – the *Menace* code is now pretty well complete and playable!

All the paths for Level One are there to be blasted, collisions to aliens will reduce your ship energy until zero, at which point you will be returned back to the CLI. When you reach the end of the level the game will also return to the CLI.

This leaves only the guardian to be added, which will be covered next month along with a discussion of the ancillary stuff such as music (where does it come from, how much memory should you reserve, how much does it cost! etc), text routines, disk routines and such like. ■

Amiga 500
Batman Pack
£369.95

MAIL ORDER

SOFTSELLERS

MAIL ORDER

A590
Hard Drive
£369.95



6 Bond St., Ipswich, Suffolk. IP4 1JE



5a Dogs Head St., Ipswich, Suffolk, (Retail). 36a Osborne St., Colchester, Essex (Retail).

MAIL ORDER PURCHASE LINE (0473) 257158/210605 FAX (0473) 213457

Title	Price
688 Attack Sub	16.99
*4th Dimension	16.99
*Action Fighter	15.99
*Addidas Champ. Football	16.99
*Anarchy	13.99
*Ancient Art of War	18.99
*Ancient Art of War at Sea	16.99
Ants Head (Data Disk)	12.99
*Aquaventura	24.99
*Atomics	13.99
Balance of Power 1990	15.99
Barbarian II (Palace)	16.99
*Barbarian II (Psygnosis)	16.99
Bangkok Knights	13.99
Battlechess	16.99
Batman (The Movie)	13.99
Battle of Britain	16.99
Battle Squadron	15.99
Betrayal	15.99
Beverly Hills Cop	15.99
Beach Volley	13.99
BattleValley	15.99
Black Tiger	13.99
*Blade Warrior	15.99
Blue Angels	16.99
Bad Company	15.99
Battle of Austerlitz	15.99
Bomber	19.99
Budakhan	16.99
Chase HQ	13.99
Chaos Strikes Back	16.99
*Chuck Yeagers A.F.T.	16.99
California Games	13.99
Cabal	13.99
*Combo Racer	13.99
Conflict Europe	16.99
Conqueror	16.99
*Carthage	15.99
Colorado	16.99
*Commando Compilation	15.99
Crack Out	16.99
Cyberball	13.99
*Chicago 90	12.99
*Damocles	15.99
Day of the Pharoahs	16.99
Day of the Tiger	15.99
Defender of the Earth	12.99
*Dan Dare 3	13.99
Dragon's Breath	19.99
Dragon Flight	16.99
Dragons of Flame	16.99
Dungeon Master	16.99
Dungeon Master Editor	9.99
Demons Tomb	13.99
Drakken	19.99
Dreadnought	13.99
Double Dragon II	13.99
*Dynamic Debugger	15.99
*Eagle Rider	16.99
Elite	15.99
*Elvira Mistress of the Dark	19.99
*Emlyn Hughes Int. Soccer	16.99
E-Motion	13.99
*Epoch	15.99
Escape from the Planet of Robot Monsters	13.99
Eye of Hercules	16.99
*Flash Dragon	13.99
F29 Retaliator	16.99
*F19 Stealth Fighter	15.99
F16 Combat Pilot	15.99
Falcon	16.99
Falcon Mission Disks	13.99
*Federation Quest 1	13.99
Ferrari Formula One	16.99
Fighter Bomber	19.99
First Control	15.99
*Final Battle	16.99
Full Metal Planet	12.99
*Flood	16.99
Footballer of the Year II	15.99
Forgotten Worlds	13.99
Fast Lane	12.99
*Frankenstein	12.99
Future Wars	16.99
Fiendish Freddy	19.99

Title	Price
*Future Basketball	16.99
Gazza's Super Soccer	16.99
Ghostbusters II	13.99
Gun Ship	15.99
Gravity	16.99
Games Summer Edition	13.99
Ghouls and Ghosts	13.99
*Halls of Montezuma	16.99
Hammerfist	16.99
Heroes Quest	24.99
Highway Patrol	15.99
Hillsfar	16.99
Hard Drivin	12.99
Heavy Metal	13.99
*Hot Rod	16.99
Hounds of Shadow	16.99
Hoyles Book of Games	24.99
Hot Shot	13.99
*Imperium	16.99
Indiana Jones (Lucas Films)	16.99
Indiana Jones (US Gold)	13.99
Ivanhoe	13.99
Iron Lore	19.99
Iron Tracker	12.99
Infestation	16.99
Interphase	15.99
*International 3D Tennis	16.99
*International Athletics	12.99
*International Champion Wrestle	16.99
Italy 1990	16.99
It Came From The Desert	19.99
*Jack Boot	16.99
*Jack the Ripper	12.99
Jumping Jackson	12.99
Keef The Thief	16.99
Kenny Dalglish Soccer Match	13.99
Kick Off	12.99
Kick Off II	12.99
Kick Off Extra Time	9.99
*Klax	13.99
Krypton X	12.99
Krystal	19.99
*Killing Game Show	13.99
Knightforce	15.99
Leisure Suit Larry II	19.99
*Leaving Terramis	13.99
Lightforce (compilation)	16.99
Lombard R.A.C. Rally	16.99
*Last Ninja II	16.99
*Lost Patrol	13.99
*Liverpool	15.99
*Last Stuntman	12.99
*Majic Fly	16.99
Manchester United	13.99
Maniac Mansion	16.99
*Microprose World Cup Soccer II	15.99
Midwinter	15.99
*Majic Johnson	12.99
Magnum 4 Comp	19.99
Matrix Marauders	16.99
*Might and Magic	16.99
*Mitro	13.99
*New York Warrior	13.99
Ninja Spirits	16.99
Ninja Warrior	13.99
North and South	15.99
*Nuclear War	16.99
Operation Thunderbolt	13.99
*Oriental	15.99
Onslaught	13.99
Overlander	12.99
Paperboy	12.99
*Paradroid	16.99
Pinball Magic	13.99
Police Quest II	16.99
Populous	16.99
Populous Data Disks	9.99
Planet Busters	13.99
Player Manager	12.99
P47	15.99
Powerdrift	13.99
Pictionary	16.99
*Panic Station	13.99
Premier collection 1 or 2 (Comp.)	19.99

Title	Price
*Projectile	16.99
Pro Tournament Tennis	16.99
Quartz	15.99
*Quarterback	13.99
Rainbow Islands	13.99
*Renegade	13.99
*Resolution 101	16.99
Rock and Roll	13.99
*Rorke's Drift	16.99
R.V.F. Honda	15.99
Red Storm Rising	15.99
Risk	13.99
Rally Cross	12.99
S.E.U.C.K.	19.99
Scramble Spirits	13.99
*Scroll	12.99
*Secret Agent Flies By	13.99
Space Ace	29.99
Space Harrier (New)	12.99
Space Harrier II	13.99
*Skate or Die	16.99
Sonic Boom	16.99
*Skidz	13.99
Starflight	16.99
*Star trek 5	24.99
Space Quest III	19.99
Steve Davis Snooker	12.99
Story So Far I (Compilation)	12.99
Story So Far 3 (Compilation)	12.99
Stunt Car	15.99
Shinobi	13.99
*Street Fighting Man	13.99
Switchblade	13.99
*Silpheed	19.99
Slayer	13.99
Stormlord	13.99
Shadow of the Beast	24.99
*Sherman M4	16.99
*Star Blaze	13.99
*Super Quintet	15.99
Sim City	19.99
Seven Gates of Jambala	12.99
*Super League Manager	16.99
Super League Soccer	16.99
*Survivor	15.99
Super Cars	13.99
*Shadow Warriors	13.99
*Tennis Cup	16.99
*The Keep	16.99
Theme Park	16.99
Tower of Babel	15.99
*Toyottes	13.99
*Turbo Buggies	13.99
*Turrican	16.99
TV Sports Football	16.99
Triad II (Compilation)	16.99
*Trivial Pursuit (Family Edition)	16.99
The Gales	16.99
*Trivia	12.99
*Track Attack	13.99
Turbo Outrun	13.99
TV Sports Basketball	19.99
Typhoon Thompson	16.99
Ultimate Golf	16.99
Ultimate Darts	13.99
*Universe III	12.99
Untouchables	13.99
*UMS II	15.99
Ultima V	19.99
*Venus Fly Trap	13.99
Warhead	16.99
*War Monger	16.99
*Warp	13.99
Waterloo	15.99
Wild Streets	15.99
Wings of Fury	13.99
Winners (Compilations)	19.99
World Cup Soccer '90	13.99
Xenon II	16.99
Xenomorph	16.99
X-Out	13.99
*Zone Warrior	16.99

HARDWARE

AMIGA 500 "FLIGHT OF FANTASY" PACK
Modulator, F-29 Retaliator, Escape From The Planet of the Robot Monsters, Rainbow Islands, Deluxe Paint II
£369.95

AMIGA 500 "BATMAN" PACK
Modulator, Batman, New Zealand Story, Interceptor, Deluxe Paint II
£369.95

AMIGA 500 + 1084S
Either pack above + colour monitor
£599.95

AMIGA 500 "CLASS OF 90's" PACK
Educational Pack
£529.95

COMMODORE 1084S
Colour Monitor
£249.95

AMIGA EXTERNAL DRIVE
Power Drive 1 Meg D.S
£79.95

AMIGA MEMORY EXPANSION
512K + Clock Card & FREE game
£79.95

A590 HARD DRIVE
20 Meg Hard Drive
£369.95

CHEQUES AND POSTAL ORDERS MADE PAYABLE TO SOFTSELLERS. POST & PACKING FREE IN UK. OVERSEAS £1.50 PER ITEM. Subject to availability and price change without notice. *Some titles may not be released at time of going to press. Shop prices may vary, but personal callers can claim advertised discounts on production of cut-off slip.

TITLE	COMP	PRICE
	TOTAL COST £:	

Have you ordered from us before? YES NO

Name ....

Address ....

....

....

Tel. No: ....

Amiga 500
Class of 90
Pack
£529.95

AMF JULY

Amiga 500
Flight of
Fantasy
£369.95

FREE !!
HIGH QUALITY SOFTWARE

Learn how to write it,
Get a Recognised Qualification
and get a good job.

One 'A' Level, good GCSE's or equivelent could qualify you to study for a BTEC

Higher National Diploma
in
Software Engineering

LEA grants are available for this course.
In addition sponsorship providing extra money and a guaranteed job offer upon completion is also available.

For further details and an application form
Contact:- WATFORD COLLEGE,
Faculty of Technology, Hempstead Road, Watford, Herts. WD1 3EZ Tel (0923) 57613 (24Hrs)
Course starts 1st October 1990

Bulk Disks

3 1/2	ALL DISKS ARE 135TPI AND HAVE A LIFETIME G.T	
10	DISKS	6.99
25	"	15.99
50	"	27.99
100	"	50.99
100+	"	RING

5 1/4	ALL DISKS ARE DSDD AND HAVE A LIFETIME G.T	
10	DISKS	3.99
25	"	8.99
50	"	15.99
100	"	28.99
100+	"	RING

WE HAVE A FULL STOCK RANGE OF AMIGA AND ATARI ST PERIPHERALS AT DISCOUNT PRICES

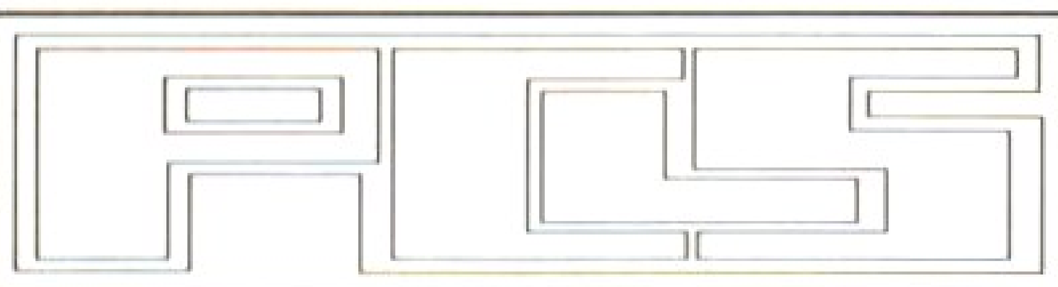
Phone 0244 312666



A & M
Disk Supplies



52A BROOK STREET, CHESTER, CH13DN



SECOND FLOOR, 33 CHAPEL GREEN ROAD, HINDLEY, WIGAN, LANCS, WN2 3LL, ENGLAND.
FAX: (0942) 819649 TEL: (0942) 840551

FREE DISK BOXES*
• 80 CAPACITY
CALL DARRELL OR BAZ NOW ON (0942) 840551
HURRY LIMITED STOCKS
* With every order of 100 disks

ALSO
DISKS: PCS **BRANDED** DISKS

3 1/2"	DSDD	1-100	60p	101 + 55p
5 1/4"	DSDD	1-100	38p	101 + 38p

Prices include VAT

PUBLIC NOTICE
Due to lack of space we cannot advertise our full product range, so simply send a S.A.E. to the above address.

AND AMIGAS:

A500 .....£375.00	512K	upgrade	= £55.00
B2000 ....£999.99	512K	upgrade with clock	= £60.00

All prices are subject to VAT + Delivery

We are also stockists of Star and Citizen printers £P.O.A.
We stock the top name peripherals eg. Quickjoy joysticks.

OPENING SHORTLY - SOFTWARE LIBRARY. RING FOR MORE DETAILS.

TRADE ACCOUNTS WELCOME
★ FAX YOUR ORDER ON (0942) 819649 ★

Prop. D.K. Belshaw THE PROFESSIONAL COMPUTER DISTRIBUTION SERVICE VAT Reg No. 534 8059 36

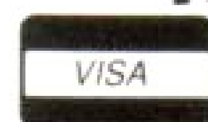
RAMTEK
Buy direct from the Manufacturers
Highest quality, lowest price

A500 1/2 MEG RAM Expansion — £52 INC VAT

A500 1.5 MEG RAM Expansion — £149 INC VAT

BOTH WITH BATTERY BACKED CLOCK ON/OFF SWITCH & HIGH SPEED D.RAMS

Cheques to RAMTEK
P.O. Box 94, Oldham, OL4 4SX



Tel: 061 627 2044



24 Hr Credit Card Hotline

THE spy WHO came in WITH A code

Join the MI5, KGB and CIA in keeping your vital information secret, as PAUL ANDREAS OVERAA introduces encryption techniques for the Amiga.

Cryptology, the study of systems for secret communications, is not a new subject by any means. People have been writing messages and translating them into secret codes for as long as they have been writing at all. During that time there's also been an equally enthusiastic bunch of homo sapiens trying their best to decipher such messages.

As well as the obvious military-type practical uses, there has always been quite a strong underlying academic interest in the subject. Part of the reason for this is that the study of encryption techniques and the cracking, ie deciphering, of code systems is much akin to doing crosswords or jigsaw puzzles. And let's face it... people always like puzzles!

Cryptology can be split into two areas: cryptography, the design of secure communications systems, and cryptanalysis, the study of the ways in which "secure" systems can be compromised. Since no-one studies either of these fields in isolation, encryption and deciphering techniques are, in practise, most conveniently dealt with together.

The advent of the computer has certainly helped the development of more sophisticated encoding schemes, but the main benefit has simply been that the hard work involved in encoding and decoding large amounts of text can now be done automatically.

Encryption Schemes

There are a million reasons why an everyday Amiga user might find it advisable to encrypt selected files. Perhaps it's convenient to keep certain files on a hard disk system which is used by many people: the user wants the files available on the system, but doesn't want every Tom, Dick or Harry to be able to read them. It's not just text files that may need some protection – you might have certain programs that are potentially dangerous if used improperly. Sure, you can keep such programs on floppies and lock them away, but it's often just as easy to restrict the programs by adding your own encryption or deciphering tricks.

Simple Tricks

On the Amiga there's not much available as far as commercial packages go... but surprisingly enough, it is possible in many cases to protect a file from prying eyes by using very simple devices. I kid you not – with some programs, especially where file read/write routines are already available, it's usually perfectly posible to hide the contents of your files by adding just one or two extra lines of code to the program.

Like protection, the "encryption game" has some funny rules. Firstly, most books that talk about secure



and insecure encryption techniques tend to assume that the potential "bad guy", the person who might try to decipher your file, actually has access to the file in the first place. I don't wish to be unkind but a rather large percentage of potential "bad guys" can be fooled by trivial devices such as putting a blank space at the end of directory and file names.

Try this – open a CLI and type MAKEDIR "ram:testdirectory " placing a space after the last 'y' character. Now try and look into it by typing DIR ram:testdirectory. Were you told the directory doesn't exist?

You can even go one better than that and do away with directory and filenames completely. Using the double quotes you can create directories and files which a lot of users will never know are there. ED "ram: " for instance will create a file in the ramdisk whose name is actually a single blank space. By nesting blank directories within blank directories, using files with blank filenames, and then creating a few dummy directories called CONFIDENTIAL_MATERIAL (just to lead the "baddies" astray) you can probably eliminate 99% of casual snoopers without encrypting your datafiles at all.

It's even possible to go one step further and hide directories from AmigaDOS itself by playing around with the FileInfoBlock structures (although this is not recommended unless you know what you are doing). These sort of tricks obviously don't work against more informed users who can use the CLI to list nested directories, measure file sizes or use program and system utilities to identify such "hidden" files. The solution? We move on to try out some real serious encryption tricks...

Trickier Tricks

Let's have a look at the basic problem: We have a file which we wish to make "unrecognisable". What can be done about this?

One of the simplest tricks is to read the file into a buffer, exclusive-or each byte with value known only to us, and then re-write this file back to disk. It's an old trick and the benefit of this particular technique is that the original file can be retrieved by using exactly the same – the second "exclusive-or" process undoes the effect of the first.

The disadvantage is that it's rather too well known, especially amongst programmers. One of the first things a programmer is liable to do when attempting to decipher such a file would be to use a short loop routine to perform a byte-by-byte exclusive-or translation using all of the numbers from 1 to 255.

Another very old and simple method is known as the "Caeser cipher". It uses a cyclic alphabet-twist whereby the n'th letter of the alphabet is replaced by the (n+k)th letter (using a mod 26 based conversion where necessary). If we use k=l every letter in the file is replaced by the letter which follows it alphabetically so...

the text THIS IS A SECRET FILE

would be encrypted as UJIT JT B TFDSFS GJMF

The Caeser cipher is not particularly well liked. For serious uses it's far too easily cracked. Firstly it would only take 26 guesses to find the K value which had been used; secondly spaces in the file would enable short words (which are easily guessed in any case) to be recognized.

A similar method, known as the Vigenere cipher, uses a separate table to define the K values and this improves the situation somewhat. We can, of course, also improve matters by using a randomly-selected table to define the text substitution, like this...

original alphabet: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
replacement : F H L A G M I N B O J R S K P Q C T D U X Z Y W E V

Military cryptologist still frown on these techniques... and for a very good reason. These simple substitution ciphers are quite easy to break. You can find a way into the code by recognising that certain letters within the alphabet, such as E, are used much more than others. Another weak-point is that certain pairs of letters – QU and ER for instance – often occur together, and at the other extreme there are loads of letter combinations, such as QK, which never occur. All of these clues make a cryptanalyst's job easier.

One solution to this problem is to use more than one table, or to use translation keys which are as long as the text itself. A long key substitution method, known as the Vernam cipher or the "One Time Pad", was reportedly used at times on the Washington-Moscow hotline.

Keeping Things in Perspective

Nowadays, cryptology includes text, image and even voice encryption techniques. Since audio signals can be digitized it is, in theory at least, a relatively straightforward matter to encrypt a digitized voice. Doing such tricks in real time is a bit harder, but for our rather more restricted purposes, ie encoding and decoding information stored in computer files, we don't need to worry too much about such problems.

To start with, we are unlikely to need Washington-Moscow Hotline type techniques: firstly we haven't (hopefully) got the likes of specialist



cryptologists from units such as CIA, MI5 or the KGB trying to crack our data-files. Another problem which is unlikely to concern us is that encountered by banks and other large commercial institutions where information has to be transmitted over public networks.

If you weigh up what you are liable to actually need from an encryption/decipher system you will, as likely as not, come to these conclusions: simplicity, speed, guaranteed protection against the more-than-average "bad guy" and, of course, the total automation of the encryption and deciphering process as applied to your computer files.

You don't need to pay for that sort of protection – you can do it yourself very easily indeed. Here's some help to get you started.

Practical Techniques

Firstly let's assume that the data-file has N characters in it. Now we are going to replace each character in the file by some encrypted version. To do that we'll read each character in the file and convert it according to some pre-determined rule, using something like this sort of pseudo-code loop arrangement....

```
Initialize I pointer to zero
WHILE NOT END FILE
   Increment I pointer, Read
the I'th character
   Change the I'th character
to something else
WEND
```

Now, we don't want every particular alphabetical character to be converted to the same character all the time because that makes the game far too simple. Instead, we'll use the character's position in the file to compute a "conversion key". An obvious extension to the exclusive-or technique mentioned earlier is to use I, the character position being tracked in the loop, to produce a key which can be exclusive-or'ed with the character in question. Since we're dealing with one byte at a time it's necessary to use a modulo 256 equivalent, so the pseudo-code sketch now looks something like this...

```
Initialize A pointer to zero
WHILE NOT END OF FILE
   Increment I pointer
   Read the I'th character,
which we'll call TEXT(I)
   TEXT(I)=TEXT(I)    exclu-
sive-or'ed with modulo 256
WEND
```

Let's suppose you'd like to include a user-definable key; how do you do it? One obvious way is to get the program to ask for a numerical key value, and then use it within the loop in the fashion over the page...

```
Initialize I pointer to zero
WHILE NOT END OF FILE
   Increment I pointer
   Read the I'th character,
which we'll call TEXT(I)
   TEXT(I)=TEXT(I) exclusive-
or'ed with (I+KEY) modulo 256
WEND
```

Of course the program needs a numerical key value to do its translation work, but there's no reason why the user has to actually enter a numerical value. You could, for example, arrange for the program to accept words or mouse movement, and then do the necessary key conversion internally.

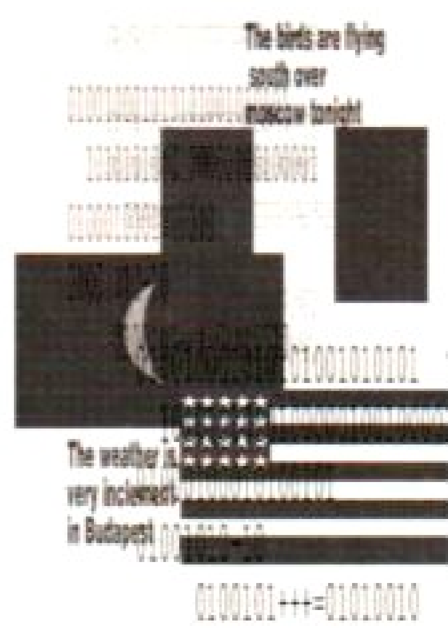
Last Words

I've sketched a short BASIC program which uses key/position based exclusive-or'ing to perform the file encryption. Try it on a text file then run it again on the destination file produced – the same program will decipher the encrypted version for you. Don't forget that the example program effectively takes a MOD 256 function of any key used, so someone with acess to both the encryption program and your datafiles would only have to make 256 guesses before they deciphered your file. What can you do?

Well, if you want more security, but don't want to use a more sophisticated encryption scheme, why not encrypt the file twice using TWO DIFFERENT ENCRYPTION KEYS. To decode your file just decipher it twice – applying the same decipher keys in any old order.

How many guesses would be needed to decipher the doubly-encrypted file? It's not 65536 (256 times 256) becuase the deciphering can be done using two keys in any order. Actually the double encryption puts the guesswork neede up to 32768 attempts which is a bit more respectable, though far from ideal.

To finish, however, let's briefly mention a general point which should be of interest to those of you who already know what I've been talking about: text files are essentially just streams of binary numbers and these loop arrangements essentially replace such numbers with other numbers. The conversion in the above example is a rather simple fixed mathematical function – but there is no reason at all why far more complex functions couldn't be used, and no reason at all why part of the user's encryption key couldn't be used to modify the encryption function itself. This suggests the general scheme...




```
Initialize I pointer to zero
WHILE NOT END OF FILE
   Increment I pointer
   Read the I'th character,
which we'll call BYTE(I)
   BYTE(I)=Some position and
key related function
         F(BYTE(I))  combined
in some way with a function
of the chosen encryption KEY
WEND
```

Schemes like this mean that anyone attempting to decode the file firstly has to guess the key value, secondly has to realise that a position-related encoding scheme has been used, and lastly has to be able to actually deduce the exact forms of the various functions involved.

If you're quite happy with these ideas, then have a look at the example program (printed below) and then experiment by changing the single program line which does the actual character conversion. Depending on the arrangements you choose, you may find that you need separate encoding and decoding programs, but that'd be a small price to pay in most cases. On the whole I think you'll be quite surprised how effective, and how versatile, these very simple techniques can be! ■

```
REM ===========================================================
REM File Encryption – A Simple example to give you the general idea
REM ———————————————————————————————————
REM You can add all the bells and whistles you want, but the basic idea
REM is simply this....
REM
REM OPEN SOURCE AND DESTINATION

REM              READ AND PROCESS EACH CHARACTER IN THE SOURCE FILE
          WRITING EACH MODIFIED CHARACTER TO THE DESTINATION FILE

REM CLOSE SOURCE AND DESTINATION FILES
REM ———————————————————————————————————
REM This particular example is a reversible scheme. If you use it (using the SAME key) on a file
REM which has already been encrypted the program will decipher the encrypted file!

REM IMPORTANT: To avoid cluttering the basic ideas I've not included input checking, i.e.
REM checking user input for sensible filenames and senible key values, and there's no fancy
REM screen display.

REM What is worth noting however is that the WHOLE PROGRAM needs just 10 real lines of
REM BASIC with the encryption magic being done by this single statement.....
REM
REM                      x = x XOR ((key+position) MOD 256)
REM
REM I wouldn't recommend such a simple function for serious use but as an "easily understood"
REM starting point it does serve a useful purpose. Once you understand the overal ideas you can
REM experiment with more sophisticated functions.
REM ———————————————————————————————————

REM First step is to get the filenames and a "key" value

INPUT "Source file ?", SOURCE$
INPUT "Destination file?", DESTINATION$
INPUT "Encryption file ?", key


REM Then open the files and initialize a position counter

OPEN "i",£1,SOURCE$ : OPEN "o",£2,DESTINATION$ : POSITION = 0

REM Now loop, reading the source file byte by byte, carrying out the encryption function on each
REM character and writing the encrypted character to the destination file.

WHILE (NOT EOF(1))
   CHARACTER$ = INPUT$ (1,£1) :
   X = ASC (CHARACTER$) : position = 1
   X = X XOR ((key+position) MOD 256) : PRINT£2, CHR$ (X);:
WEND

REM All done so just close the files and quit

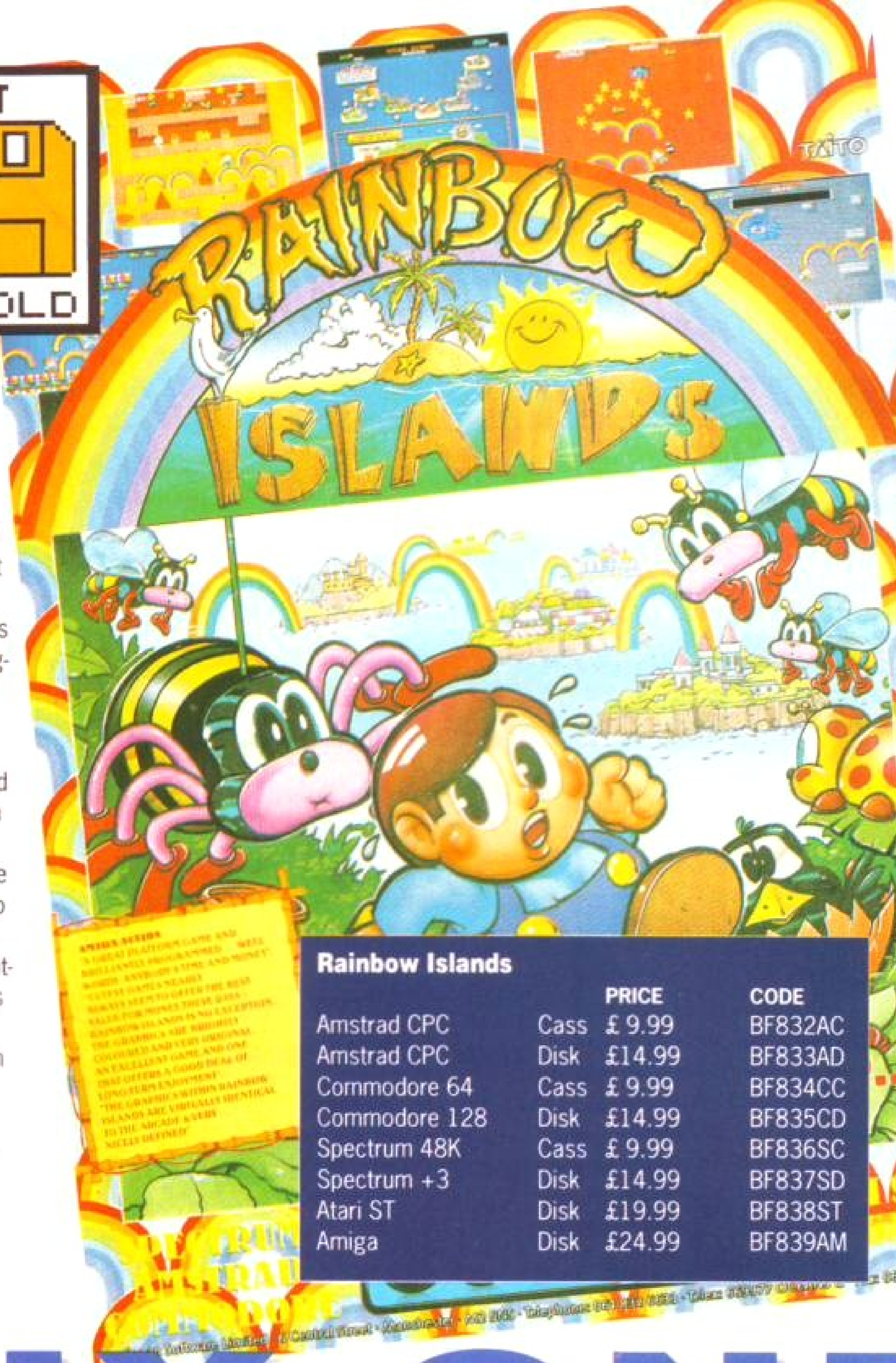
CLOSE 1 : CLOSE 2 : END
REM ===========================================================
```

1



Rainbow Islands
from Ocean

This follow up to Bubble Bobbie looks set to be as much of a hit as Ocean's last cutesy game, New Zealand Story. It combines colourful visuals with frighteningly addictive gameplay, with the result that you end up with one hell of a game.
Graphics have been downloaded from the original arcade version and the moves are just the same. Lead Bub and Bob to the top levels by firing rainbows into the air and then climbing them. When you reach the top of a platform, you can collect thousands of bonus points. There are seven islands to complete, each one more challenging than the last.
"Graftgold's ST Version of Rainbow Islands is one of the best coin-op conversions to have appeared in along time" Maff Evans, ST Format



Rainbow Islands

		PRICE	CODE
Amstrad CPC	Cass	£ 9.99	BF832AC
Amstrad CPC	Disk	£14.99	BF833AD
Commodore 64	Cass	£ 9.99	BF834CC
Commodore 128	Disk	£14.99	BF835CD
Spectrum 48K	Cass	£ 9.99	BF836SC
Spectrum +3	Disk	£14.99	BF837SD
Atari ST	Disk	£19.99	BF838ST
Amiga	Disk	£24.99	BF839AM

THE B

An INCREDIBLE way to buy the month's top titles!

BUY ONE – G

BIG FOUR MAIL ORDER

- Fast delivery
- Friendly service
- Fabulous savings

We're backed by the resources of one of Britain's most successful publishers so you can order with confidence.

It's so simple!

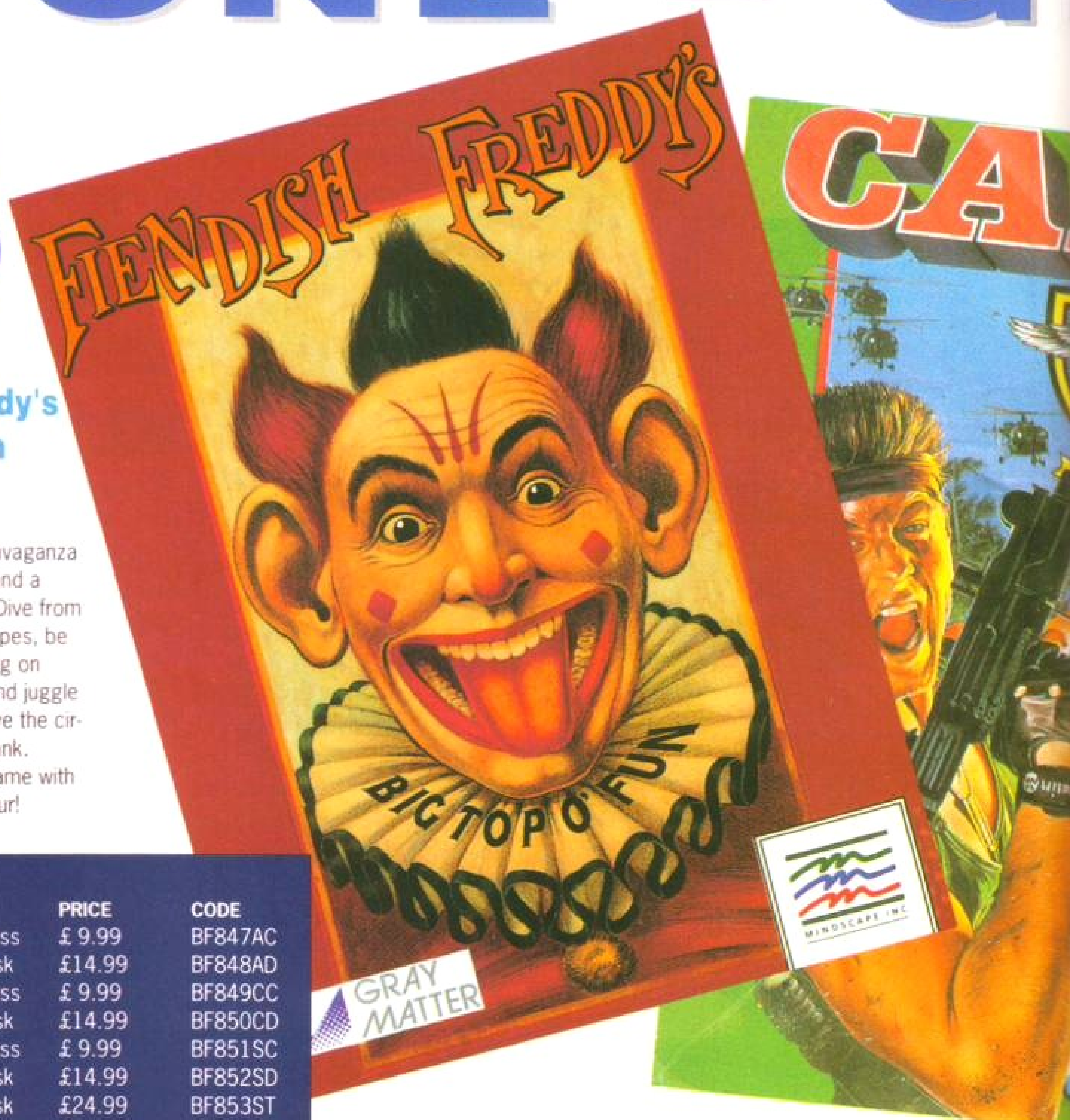
You may find it hard to believe that we're GIVING away software but it's true. You simply buy any of the titles on this page at the normal retail price listed and then you can pick any other title (or the same title on a different format) absolutely free of charge!
The only condition is that the value of the free game must not be greater than that of the game you're paying for.
Apart from that there are no strings attached. It's literally TWO for the price of one! Or FOUR for the price of two...the sky's the limit! Have you ever seen a better offer...?

FIRST CLASS POST, PACKING & VAT, INCLUDED

3

Fiendish Freddy's Big Top of Fun
from Mindscape

Mindscape's circus extravaganza brings you thrills, spills and a whole barrel o' laughs. Dive from high-boards, walk tightropes, be fired from cannons, swing on trapezes, throw knifes and juggle in a desperate bid to save the circus from the big bad bank.
An original multi-event game with a wicked sense of humour!



Fiendish Freddy

		PRICE	CODE
Amstrad CPC	Cass	£ 9.99	BF847AC
Amstrad CPC	Disk	£14.99	BF848AD
Commodore 64	Cass	£ 9.99	BF849CC
Commodore 128	Disk	£14.99	BF850CD
Spectrum 48K	Cass	£ 9.99	BF851SC
Spectrum 128	Disk	£14.99	BF852SD
Atari ST	Disk	£24.99	BF853ST
Amiga	Disk	£24.99	BF854AM

G 2



Black Tiger
from U S Gold

US Gold have had major hits with Strider and Ghouls 'n' Ghosts. Now comes their latest horizontally-scrolling action game, Black Tiger.
In a similar fashion to Ghouls, the objective is to charge through horizontally-scrolling levels, climbing ladders and following red arrows to the end of the level. Along the way, fight ugly gargoyles, snakes and even deadly orchids using your powerful weaponry. When the going gets tough, disappear inside the shop, pick up some extra weapons, and go out for another merry blast.
If you're a fan of horizontally-scrolling action games, you'll love this one.

Black Tiger

		PRICE	CODE
Amstrad CPC	Cass	£ 9.99	BF840AC
Amstrad CPC	Disk	£14.99	BF841AD
Commodore 64	Cass	£ 9.99	BF842CC
Commodore 128	Disk	£14.99	BF843CD
Spectrum 48	Cass	£ 9.99	BF844SC
Atari ST	Disk	£19.99	BF845ST
Amiga	Disk	£24.99	BF846AM

ET ONE FREE!



4

Cabal from Ocean

Go crazy in cartoonland with Cabal. A lone trooper, he's dropped behind enemy lines and must fight his way back home. Level after level must be cleared of buildings and bad guys with machine guns, grenades and bazookas. It looks like Operation Wolf for the under fives but plays like a vet.

Cabal

		PRICE	CODE
Amstrad CPC	Cass	£9.99	BF855AC
Amstrad CPC	Disk	£14.99	BF856AD
Commodore 64	Cass	£9.99	BF857CC
Commodore	Disk	£14.99	BF858CD
Spectrum 48K	Cass	£9.99	BF859SC
Spectrum +3	Disk	£14.99	BF860SD
Atari ST	Disk	£19.99	BF861ST
Amiga	Disk	£24.99	BF862AM

ORDER HOTLINE 0458 74011

Post to: Big Four Mail Order, The Old Barn, Somerton, Somerset TA11 7PY

YES, **I want to take advantage of this remarkable way of buying software.**

The game(s) I would like to BUY are:

Title	Machine	Order Code	Price

The game(s) I would like FREE are: (You may claim one free title for each game bought. The total price of the free game(s) must not be greater than the total price of the paid-for game(s).)

Title	Machine	Order Code	Price
			FREE!
			FREE!

NAME

ADDRESS

POST CODE

PAYMENT BY: ☐Cheque ☐Access ☐Visa

CREDIT CARD NUMBER

EXPIRY DATE

Please make cheques payable to "Big Four Mail Order".

GAME Busters





Silence, sea and sky – Ah, what a peaceful thought! But all you lot are probably looking forward to is thrashing it out noisily against invading alien species. **MAFF EVANS** is willing to offer some help. I don't know, some people, mumble, moan...

DUNGEON MASTER

Last month a list of useful spells was printed, but there are some people out there who don't really think that's enough: so here are some more involved hints.

First up, here are all the remaining spells (as far as anyone round here knows) which you can add to your arsenal.

YA – Stamina potion
VI – Healing potion
FUL – Light
ZO – Opens some doors
YA IR – Magical group shield
YA BRO – Magical shield
VI BRO – Poison cure
OH VEN – Cloud of poison
FUL IR – Fireball
DES VEN – Poisonball
DES EW – Weakens non-material beings
ZO VEN – Poison potion (Ven bomb)
YA BRO ROS – Magic footprints
YA BRO DAIN – Wisdom potion
YA BRO NETA – Vitality potion
OH EW RA – Magical sight (X-Ray vision)
OH KATH RA – Lightning bolt
OH EW SAR – Invisibility
OH IR RA – Long-lasting light
OH BRO ROS – Dexterity potion
DES IR SAR – Darkness
DES IR RA – Long-lasting darkness
FUL BRO KU – Strength potion
FUL BRO NETA – Fire shield
ZO KATH RA – Magical plasma (for attaching gem to fire staff)
ZO BRO RA – Mana potion

Not surprisingly, the main problems you will encounter are the creatures of the dungeon, so here is a run-down of the bogie-monsters you may come across.

MUMMIES (Levels 2,3 and 8)

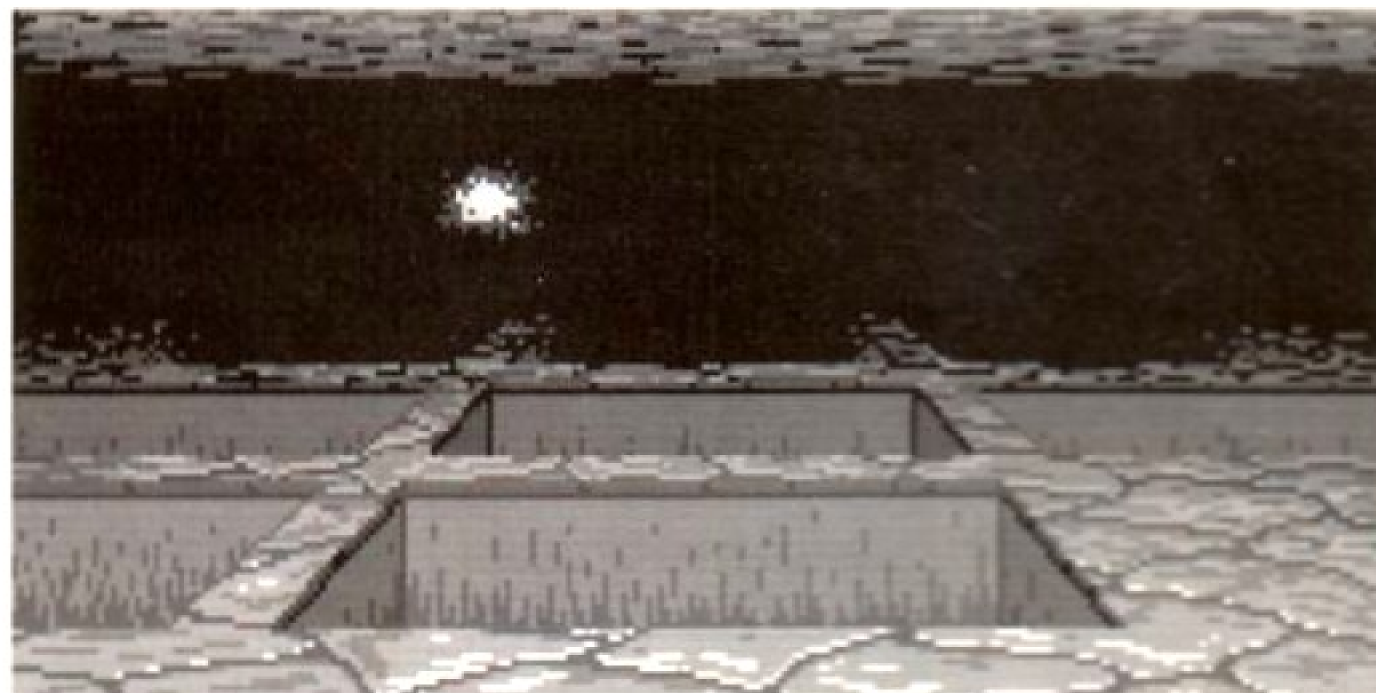
On Levels 2 and 3, just use weapons as they're easy to kill. On Level 8 use magic, because it is a good deal faster.

SCREAMERS (Levels 2,3 and 4)

Easy enough to kill with axes. Use them as fighting practice and as a useful food source. Near the end of Level 4 there is a regenerating room to be found.

OGRES (Levels 3 and 4)

These blokes can do some serious damage to low-level characters. They carry clubs which they drop when they're killed.



ROCK MONSTERS (Levels 3 and 4)

These are hard to destroy, but luckily they move slowly. They poison adventurers, so use poison or fireballs against them.

PURPLE WORMS (Level 4)

These are wicked little tykes. They hang around in pairs and are quick to pursue and poison you. Be ready with some high-level fireballs to deal with them.

GHOSTS (Levels 4 and 8)

Silent and fast, these can pass through doors. Use DES EW spell to destroy them.

GIANT WASPS (Levels 4,5,6 and 11)

Quite fast and inject poison into you. Throw fireballs at them and try to avoid hand to hand combat. Level 11 is rather crowded, so a few high-level fireballs are needed. Be prepeared to sleep for a while.



SLIME CREATURES (Level 5)

These slimey creatures use magic, so do the same in return with a DES EW spell. Slow in pursuit.

UNDERPOWERED COUATLS (FLYING SNAKES) (Level 6)

Fast-moving and poisonous, they can be killed with a combination of one high-level fireball and combat.

SKELETONS (Levels 6,8 and 10)

Can be fought with straight combat – a good chance to test your skills. They carry falchion swords and wooden shields.

BEHOLDERS (FLOATING EYES) (Levels 6 and 10)

These fight using lightning bolts, so reply in kind. The the only creatures capable of opening doors.

STONE GOLEMS (Level 7)

Only five of these are on the level and they move slowly, but they take a lot of fireballs before they co-operate.

GIGGLING SODS (DEFORMED PIXIES) (Levels 8 and 10)

These don't do a great deal of damage, just cause a nuisance by

stealing whatever is in your characters' left hands and running off at great speed. They giggle just as they are about to steal an item, so loose off a fireball or give them a quick whack with a melee weapon to take them out. Any items stolen by these bandits can only be retrieved once they are dead.

GIANT RATS (Level 9)
Straight hand-to-hand combat or magic will turn these fellers into chicken drumsticks.

RUST MONSTERS (Level 9)
These may look like the AD&D Rust Monsters, but they don't turn your characters' armour to rust. They can be killed by striking them with whatever you have. They do their fair share of damage, but luckily there aren't too many of them about.

LITTLE MAGES (Level 9)
These look like the Jawas from Star Wars and fling some pretty powerful magic about. They are quite easy to kill, but have the annoying habit of transporting to beside you or behind you when they are hit.

GIANT SCORPIONS (Level 10)
Watch for the sting in the tail and dispose of them with a fireball. They vary in toughness, so watch out for surprises.

WATER ELEMENTALS (level 11)
Those frothy puddles aren't as harmless as they seem! They just might sneak up behind you and send you squiffy. They can also wash under doors so dispell them with a DES EW or two.

ETHEREAL TRIFFIDS (Level 12)
These fade in and out of existence. Use fireballs when they're solid or DES EW when in their ghostly form.

GIANT FOUR-LEGGED SPIDERS (Level 12)
Fireballs and weapons are quite effective enough against these deformed arachnids.

CHAOS KNIGHTS (Level 12)
These nasty swines attack in pairs with two swords apiece. In and out attacks through doorways are effective with high-level fireballs. Don't worry about cursed armour – it's more effective against other knights, so save it for them.

FIRE ELEMENTALS (Level 13)
These immobile plates of coals flare up whenever you approach them. Use DES EW spells to burn them out and reduce them to their flat, shiftless state.

LORD CHAOS (Level 13)
The boss-man himself. You need the firestaff to get anywhere with him. Start off by throwing flux cages everywhere. If he stands in one, go and fuse him in the cage.

DEMONS (Level 13)
These devils are rather nifty with the fireballs so counter attack in the same manner. Be prepared to make a run for it occasionally.

RED DRAGON (Level 14)
This is the only creature on the level. It can be avoided, since it is quite slow moving, but it's pretty heavy with the fireballs. If you do take it on, be prepared to spend quite some time in combat.

Now for some tips on negotiating the levels.

LEVEL 2

Have two or three bashes or chops on all the wooden doors. One has a keyhole, but can be knocked down instead. This will leave you with a spare key which can be used on a variety of doors.

LEVEL 3

Trolls breed in the creature cavern. There is one last door near the stairs going down, which contains rock monsters. Open the door, kill the monsters and sleep. There is a button on the left wall. Click it and get away as quickly as possible, as two very tough blue trolls emerge from the secret door that the button opens. Try to lead them into another room and close the door on them.

LEVEL 4

Almost all the rooms with doors contain breeding purple worms, so beware. Occasionally, there are worms that wait until you reach a certain part of the dungeaon before they breed, so when you go back they'll be waiting. If you're having difficulties, remember that the purple worms are afraid of the Staff of Claws.

LEVEL 5

The only things to really watch for on this level are the flying snakes. A couple of EE (fourth level) fireballs should take care of them.

LEVEL6

The riddle room is the one with only one floating Tentacle-head. Pull the lever and PUT (don't throw) something into the transporter. The door should now open. When the nasty horrible man calls you a coward, go his way last because it is actually a trap.

GENERAL TIPS

If you are reaching a critical level due to starvation, it's a good idea to nip back up to Level 4 and kill some worms for food. "Nobody loves me, everybody hates me, just 'cos I eat worms" © CKSI (Crap kiddy songs Inc.)

Behind the door in the place with lots of screamers is their breeding area. They only breed when you pass the room with the green boots. You'll find it's fairly easy to know when they've bred, because when you go back the path is blocked by a large and very unpleasant-looking rock monster, so ALWAYS remember to close doors behind you and so trap any such nasties behind it.

Always climb down pits whenever you possibly can, because there is usually something pretty nice hidden down there – like armour, for instance.

Jason W. Gordon, Wallington, Surrey and James Denyer, Worthing, West Sussex

PIPEMANIA

FLOOZE

You know the feeling – you are just about to get a high score on *Pipemania* and all that running fluid makes you want to go to the toilet. Never mind, here are the pass codes to the higher levels:

GRIP, TICK, DOCK, OOZE, BLOB, BALL, WILD.

For a 4000-point bonus, you must get the flooze to cross itself five times (that is, pass through the same squares a total of five times). The diagram shows a good pattern to lay the pieces in to achieve this. Remember not to be too flash and to wait until the end of the pipe to try it out!

G Pietroni Buckhurst Hill, Essex

NINJA WARRIORS

An addendum to the list of codewords printed a few issues ago. With caps lock on, type KYLIE for an Aussie TV mode. Typing CHEDDAR gives infinite lives, which is more than a bit useful.

Carl Stirland, Brinsley, Nottinghamshire

XENOMORPH

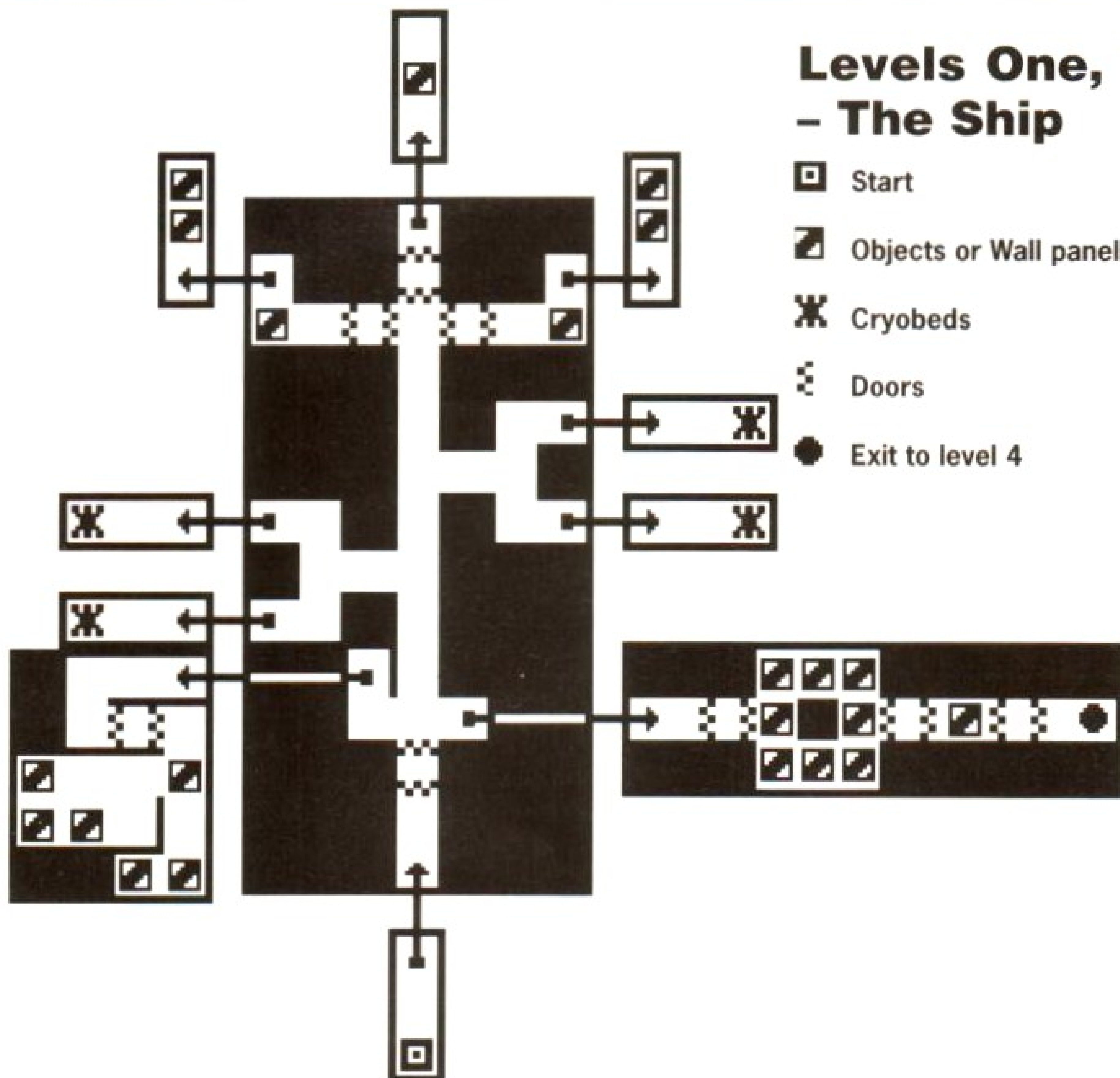
Another in the 'alien infestation' genre, but a good one nonetheless, so here are some tips and maps of all the levels for all you would-be space adventurers.

Don't bother hoarding weapons – there are far too many to hold anyway. Just find the best and stick with them. However it is useful to have a back-up device for when you are stuck in a tight spot. The Super Magnum is the best of the handguns, but ammo is in rather short supply.

Just because two sets of ladders lead downwards, it doesn't necessarily mean that they lead to the same level. Some may go down a long way – perhaps two floors – whereas another may be shorter – perhaps only going down the one level.

Standing your ground and blasting the tougher monsters (such as Blobs and Xenomorphs) is a waste of energy. Try to dodge them or better still find another way to your destination. Many of them seem to have pre-defined paths to follow anyway, and only break off when they see you. Don't open fire as soon as you see them, try to sneak past them whenever possible – it saves energy! You only have to actually kill one alien, and that's the Master Alien that lives on Level 15, so running around like Rambo does no good at all. *(Continues over…)*

Levels One, Two and Three – The Ship



Start

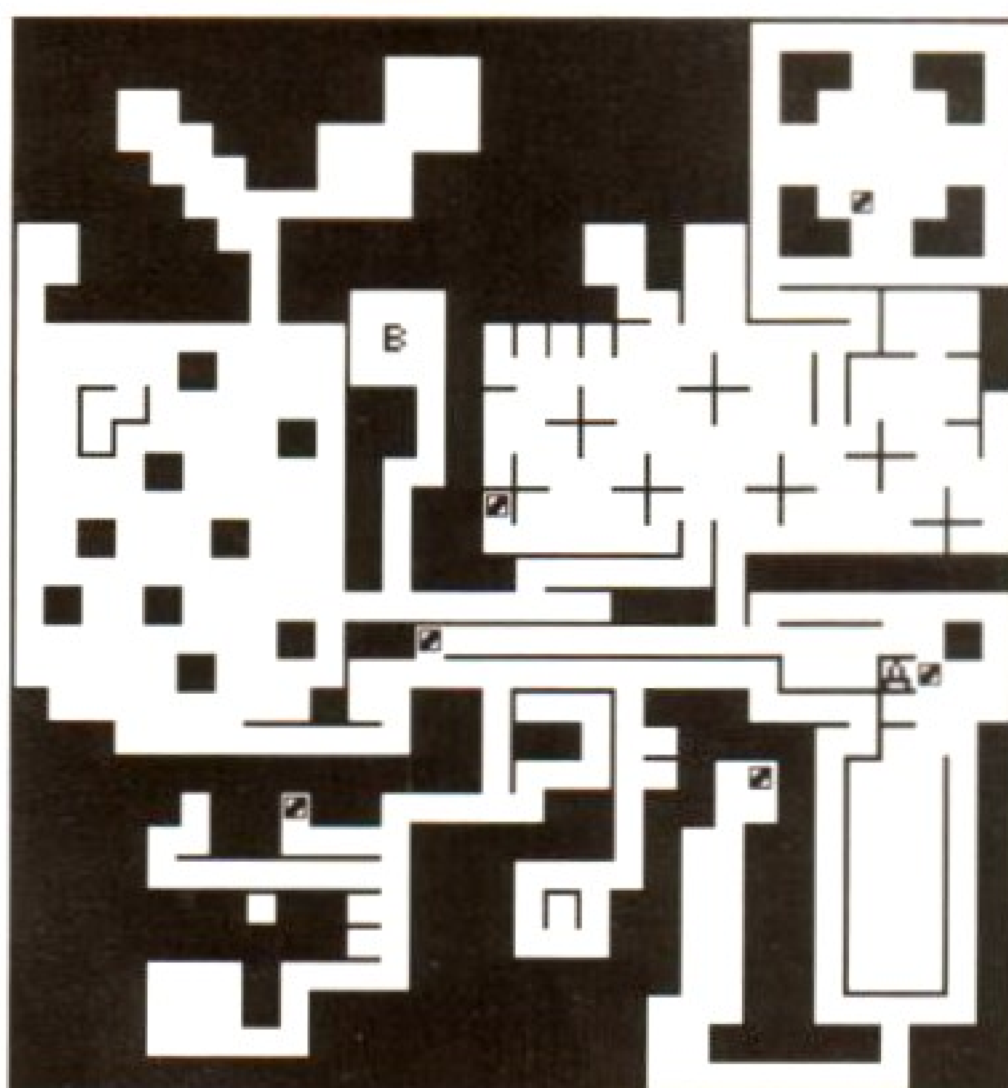
Objects or Wall panels

Cryobeds

Doors

Exit to level 4

Level Four

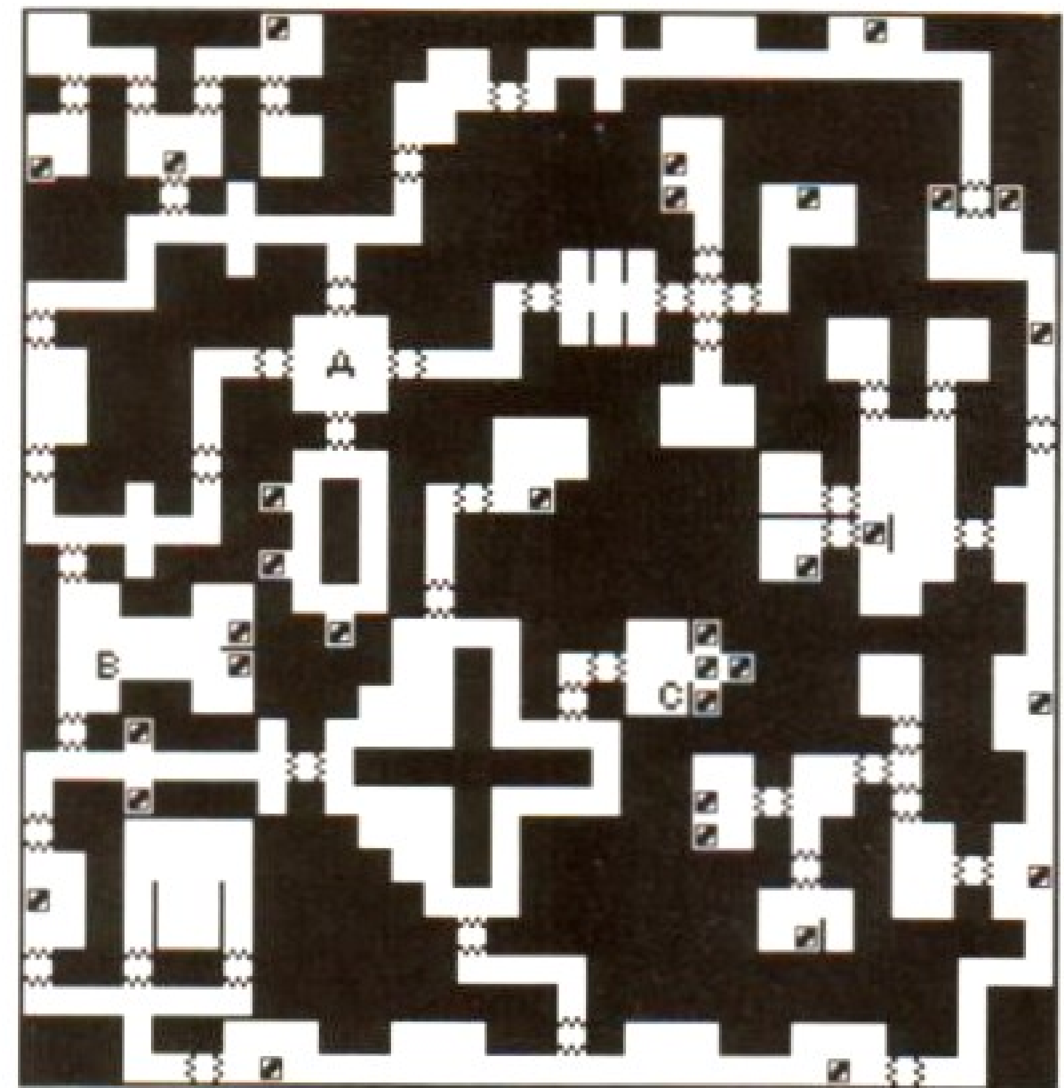


Objects

A Exit to level 3

B Exit To Level 5

Level Five



Objects/Wall Panels

Doors

A Exit to level4

B Exit to level 6

C Exit to level 7

Super GRID RUNNER



"GOOD CLEAN FUN BUT I HOPE THAT IF WE CONTACT LIFE FROM THE STARS, JEFF MINTER'S NOT THE AMBASSADOR! FOR A TENNER, IT'S *GOOD* VALUE!"
COMPUNET

"BRILLIANT, PURE ARCADE ZAPPING... NO-ONE PRODUCES GAMES LIKE LLAMASOFT... TAKES ITS PLACE AMONGST MY FAVOURITE GAMES - MAGIC!"
ST ACTION

"...GUARANTEED TO GIVE YOU A GOOD BLAST...JUST GOES TO PROVE THAT GOOD GAMES CAN GO ON FOREVER."
ST WORLD

"GRAPHICALLY STUNNING, SONICALLY EXCELLENT...LEAVES YOU GASPING...ONE OF THE MOST PLAYABLE GAMES SO FAR FOR THE ST..."
NEW ATARI USER

"MINTER AT HIS VERY BEST - NON-STOP LASER FURY WITH ADDICTION GUARANTEED...A GAME TO KEEP YOUR MOUSE CREAKING INTO THE SMALL HOURS."
COMPUTER & VIDEO GAMES

Voted ST Budget Game of 1989,

Super GRIDRUNNER is now in AMIGA format - No mere conversion but better than ever, with

- 32 waves selectable (of 64, a different challenge on each one!)
- larger screen play area
- even greater playability

£10.95!

from your AMIGA retailer or direct from

LLAMASOFT

ALSO FOR AMIGA...

Trip·A·Tron

-Jeff Minter's unique interactive graphics program is now available in AMIGA format. It's a wonderful accompaniment to any type of music - and a great creative tool.

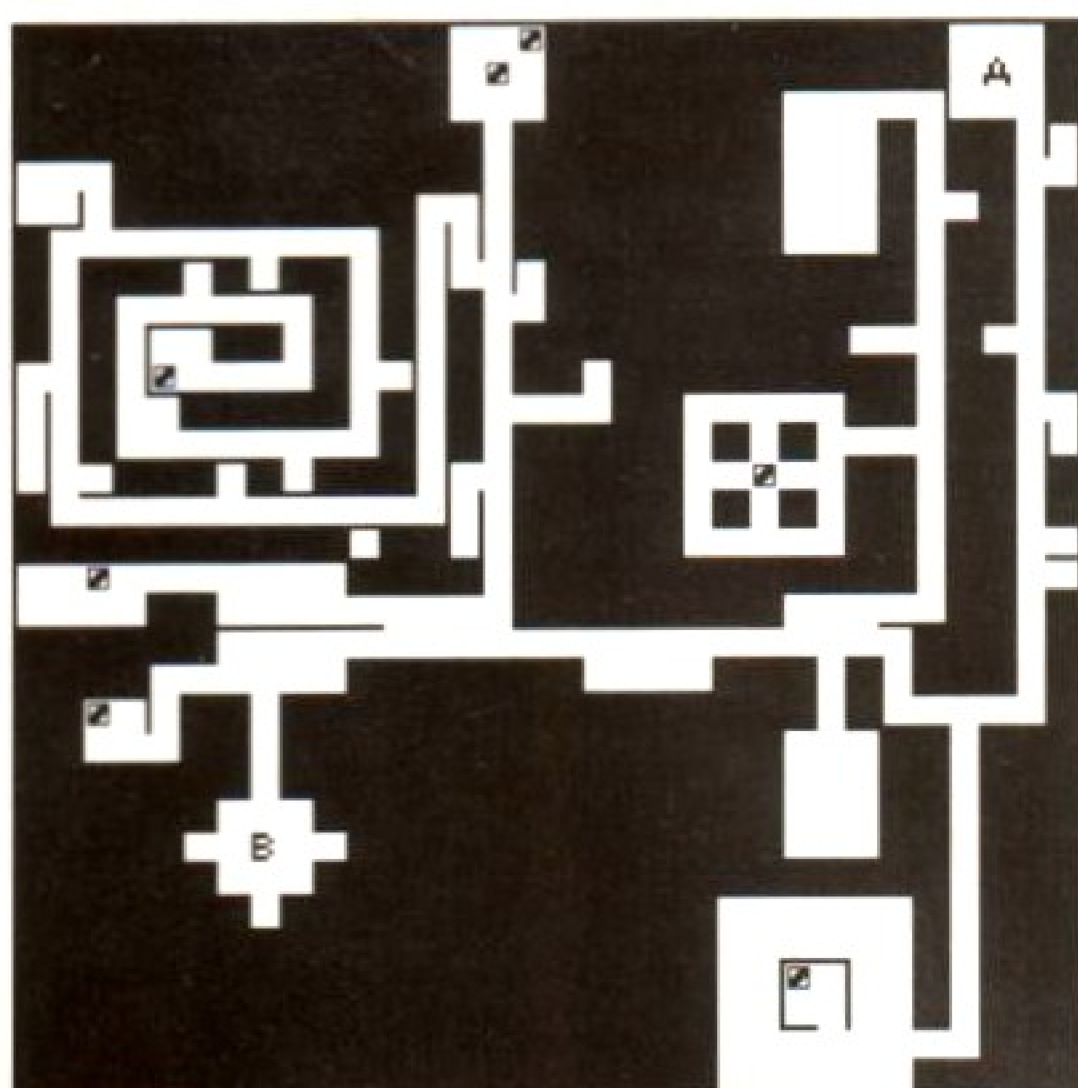
"...ALLOWS THE USER TO PLAY WITH LIGHT AS A MUSICIAN WOULD PLAY WITH SOUND."

TRIP-A-TRON includes its own programming language, KML, but comes ready to use with graphics effects pre-programmed to individual keys

TRIP-A-TRON costs £29.95 -in a handsome 3-ring binder and with a comprehensive 135-page manual.

LLAMASOFT 49 MOUNT PLEASANT TADLEY HANTS RG26 6BN Tel: 0734 814478 Fax: 0734 816313

Level Six - The Ducts

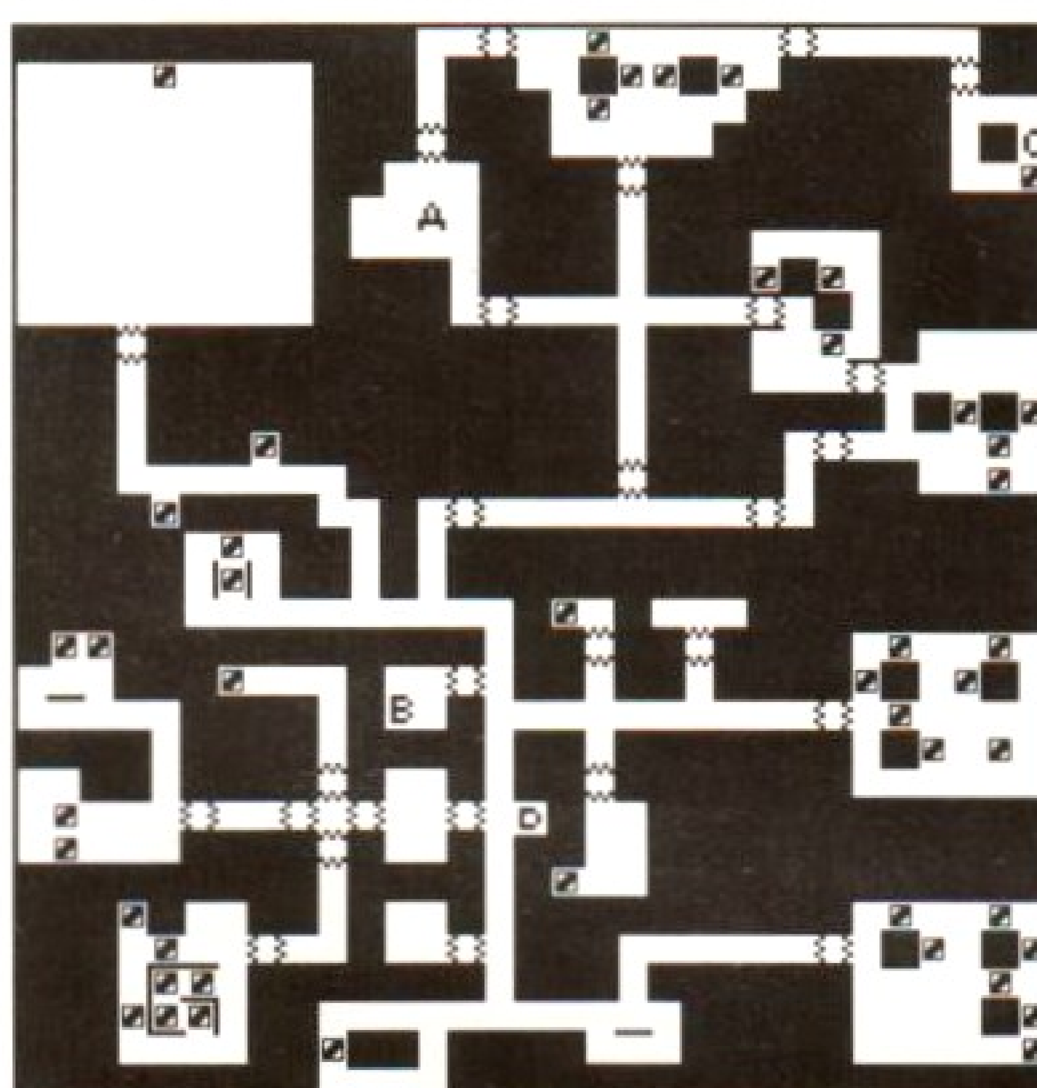


Objects/Wall Panels

A Exit to level 7

B Exit To Level 5

Level Seven



Doors

Objects/Wall Panels

A Exit to level 6

B Exit To Level 5

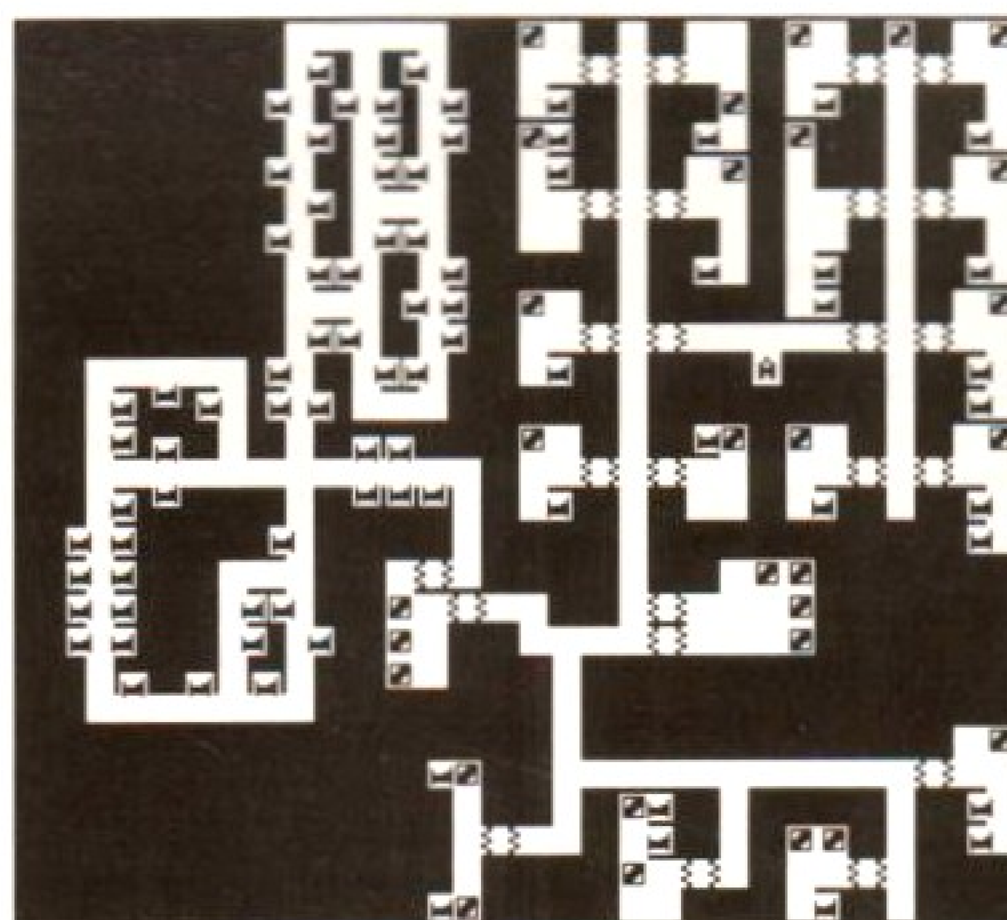
C Exit to level 9

D Exit to level 8

And now for a major upset. This may come as a bit of a shock to anyone who's spent hours trying to find the chips. Although it may seem to be the whole point of the game, you can actually complete the thing without replacing the CNS chips at all!

As long as you find and use the navigation disks and the anti-matter pellets and don't touch the maintenance circuit boards at all, the computer seems conveniently to forget that the chips have blown and takes off from Atargatis successfully. What a piece of luck!

Mat Broomfield, Basildon, Essex



Level Eight - The Infirmary

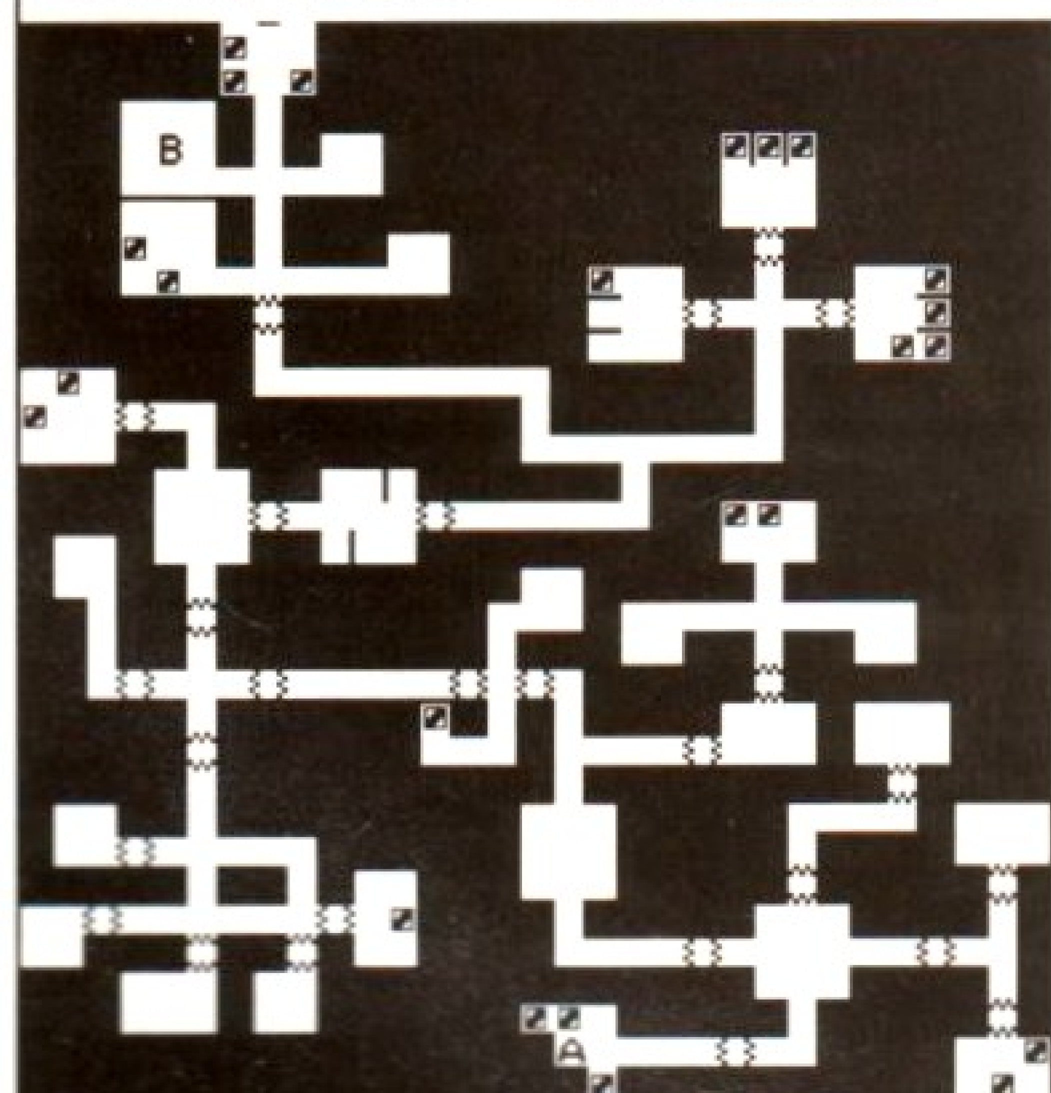
Doors

Objects/Wall Panels

Beds

A Exit to level 7

Level Nine - The Labs



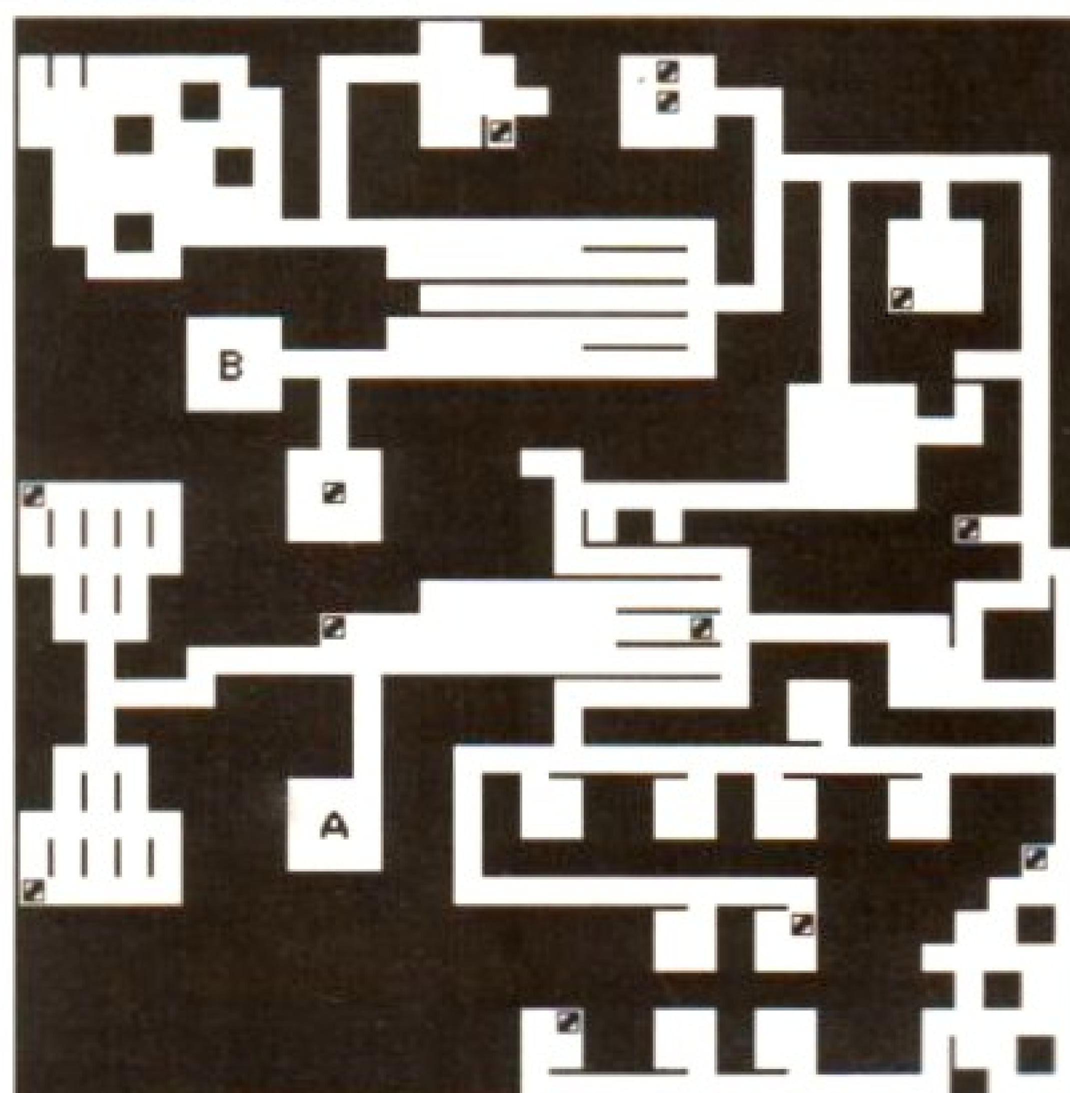
Doors

Objects/Wall Panels

A Exit to level 7

B Exit to level 10

Level Ten



Objects/Wall Panels

A Exit to level 9

B Exit to level 11



TIPS WANTED!

There are quite a few good games coming out recently, so we want to lead the way with players guides and exclusive tips. If you have any tips on *Their Finest Hour, Tower of Babel, Gravity* or *F29 Retaliator*, then send them in to GAMEBUSTERS, Amiga Format, 30 Monmouth Street, Bath BA1 2AP. There are three £50 vouchers for the best, so get them in the post tomorrow!

GHOULS 'N' GHOSTS

Type in KARENBROADHURST (no spaces) and a 'cheat on' message will appear. When you start the game you will now find that the collision detection has been removed. And... er... that's it.

Jamie Hill, Solihull, Birmingham

DRAKKHEN

Try this tip if your characters all seem to be Mr Puniverse fodder. Get into the character generation section and enter the character name as 31415927. All the character values will now be slightly increased.

When you are next asked for your name, enter SUPERVISOR. Now play the game and press Ctrl when you are standing around outside. A menu will appear giving a list of locations to go to on the left, then a list of numbers followed by three columns of abbreviations. Clicking on a location transports you directly there and clicking on a monster makes it appear.

A Lupini, Hemel Hempstead, Hertfordshire

ARKANOID

If you own a copy of this ageing 'classic', then this tip may be useful. If you don't then this will go down like a one-legged man at an arse-kicking contest.

Select the level you wish to start on and press space. Now type DSIMAGIC and press space. A capsule with DS wriiten on it should fall. Pick this up and press one of the following buttons for special effects:

D – Disruptor (splits balls in three)
L – Lasers
S – Slow ball
E – Expanded bat
B – Breach (sends you to next level)
C – Catch ball
F – Confront guardian

Steven Veal, Canvey Island, Essex

MANCHESTER UNITED

If you press the left mouse button during the game, then the two player mode will be activated, so that you can beat the trickiest of teams with ease – they just stand around doing nothing. Pretty obvious really, but I thought I'd mention it for any lazy football fans. I don't know! The impatience of some people! Why they can't play properly is beyond me, mumble, moan.

Guiseppe Jordaney, West Wickham, Kent

NEW ZEALAND STORY

Many readers will have received their copy of this cute 'n' fluffy 'n' cuddly conversion with the Batman Pack. The cheat for the version in the big cardboard box doesn't work on these plastic-enclosed later versions, so here is the correct version – as in the original cheat, press Del and then M, then enter FLUFFYKIWIS to get infinite lives – a +9 should appear at the bottom of the screen accompanied by the sound of the book if the cheat works. Pressing Help should also allow you to skip levels. Yes, much cleaner, that. None of that filthy language (no matter how it may be spelt).

Another tip that may work on some versions of the game (it doesn't on ours) is to hold Shift and type PHILLIP on the title screen. This should give our feathery hero mega firepower. Entering the same thing during the game apparently skips levels too. It's news to us, though!

Thanks to eveyone who sent these tips – there are far too many of you to list here!

FIGHTER BOMBER

All that 'coming up through the ranks' dross is for crawly boot-lickers. To gain access to any of the missions at the beginning of the game, simply type in BUCKAROO as the pilot's name.

If you're having trouble refuelling, then follow this simple advice: Press U (for Waypoint) to get the fuel-plane's position, then choose Sidewinders as a weapon and press S to lock on (the plane has to be within radar range). Switch to cannons, otherwise the plane will avoid the lock-on. You will now be able to refuel easily.

Landing isn't that difficult as long as you take your time and follow these instructions. Line up in front of the runway, making sure your horizon is level and steady, drop the gears, put the airbrakes and wheelbrakes on and press G for slow speed. Make sure you don't land on the front gear and switch off the engine as soon as you have touched down.

Steve van Haeht, Antwerp, Belgium

F29 RETALIATOR

This is one helluva flight/combat simulation, but is it ever tough? This cheat could be useful for flyers having trouble getting to grips with the latest state-of-the-art fighters.

Load up F29 and enter your name as THE DIDY MEN (with spaces) on the enrolment screen. Click on the Colonel icon and press Return. Select the battle area as per normal and select mission control. Accept a mission (without selecting one) then go back and select a mission. Now start the game and play as normal.

When it becomes time to land, just press Enter on the keypad and the plane will land automatically.

Derek Stracey, Prestwick, Ayrshire



WINNERS BOX

Rather radical prize awards this month, since Jason W Gordon and James Denyer both sent in excellent tips on the fantasy classic *Dungeon Master*. It's not really fair to split them, so vouchers are on their way to both of them. The remaining fifty quid goes to Mat Broomfield for his helpful *Xenomorph* maps. It saves me the bother with graph paper and pen I was having!

Evesham Micros

ALL PRICES INCLUDE VAT AND DELIVERY

Same day despatch whenever possible. *Express Courier* delivery £5.00 extra.

RETAIL SHOWROOMS

63 Bridge Street
Evesham
Worcs WR11 4SF
☎ 0386-765180
fax: 0386-49761
Open Mon-Sat, 9.00-5.30

5 Glisson Road
Cambridge CB1 2HA
☎ 0223-323898
fax: 0223-322883
Open Mon-Sat, 9.30-6.00
Specialist Education Centre

1762 Pershore Road
Cotteridge
Birmingham B30 3BH
☎ 021-458 4564
fax: 021-433 3825
Open Mon-Sat, 9.00-5.30

MAIL ORDER DEPARTMENT

Unit 9 St Richards Rd, Evesham, Worcs WR11 6XJ



Call us now on ✆ 0386-765500

8 lines, Open Mon-Sat, 9.00-5.30. Fax: 0386-765354
Technical support (open Mon-Fri, 9.30-5.30): 0386-40303

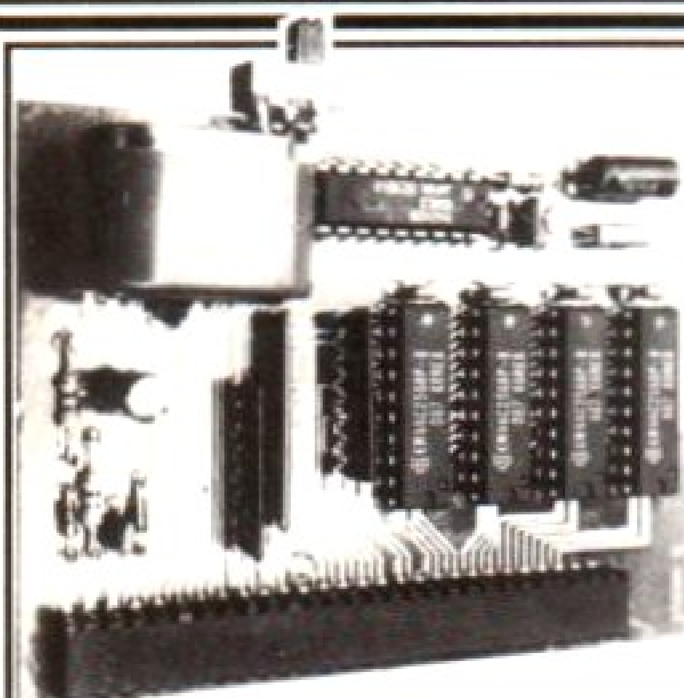
VISA



Send an Order with Cheque, Postal Order or ACCESS/VISA card details

Government, Education & PLC orders welcome
All products covered by 12 Months Warranty
All goods subject to availability, E.& O.E.

Buy with confidence from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.



AMIGA A500 512K MEMORY UPGRADE

ONLY £49.00 inc.VAT & delivery

512K RAM/CLOCK EXPANSION FEATURES :

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Uses only 4 D-RAMs for High Reliability
- ☆ Low power consumption

RAM expansion without clock, only ... £43.00

3.5" EXTERNAL DRIVES

using Teac / Citizen drive mechanisms



- Suits Amiga 500 or Amiga 1000
- Teac / Citizen drive mechanism
- On / Off switch on rear of drive
- Throughport connector
- 880K Formatted capacity
- Slimline design
- Very quiet
- Long cable for location either side of computer
- Full 12 months guarantee

Superb low price!
£64.95
Including VAT and delivery



AMIGA SPECIAL DEALS

All A500 Packages also include the following :

Karate Kid II	Jaws	Wordwright (w/processor)	Super Huey
Leatherneck	Defcon 5	Nigel Mansell's Grand Prix	Goldrunner
Battle Squadron	High Steel	Better Dead than Alien	Night Walk

Amiga 500 512K Flight of Fantasy pack includes 4 software titles and TV modulator £379.00
Amiga 500 512K Batpack includes 4 software titles and TV modulator £379.00
Amiga 500 1Mb Batpack (*OR* **F.O.F. Pack**) features our 1Mb RAM Upgrade fitted £419.00
Amiga 500 Batpack (OR F.O.F. Pack) **with Drive** includes our 3.5" External Drive £439.00
Amiga 500 1Mb Batpack (OR F.O.F. Pack) with Drive
features our 1Mb Memory Upgrade *plus* 2nd 3.5" External Drive £479.00

External 5.25" 40/80 track switchable drive	£114.95	A-Max Mac Emulator without Mac ROMS	£129.00
Omega Projects MIDI interface	£29.95	A-Max Mac Emulator with 2 x 128K ROMS	£249.00
Vortex System 2000 40Mb Hard Disk	£499.00	Music-X incredibly powerful music package	£129.00
Vidi-Amiga including Vidi-Chrome	£110.00	Home Accounts (Digita)	£18.95
MiniGEN Genlock Adapter	£95.00	Philips CM8833 colour monitor inc.cable	£259.00
Contriver Hi-Res replacement Mouse package	£22.95	Amiga 500 dust cover	£4.95

CBM A590 HARD DRIVE

Good quality Commodore 20Mb Hard Disk, including its own PSU and built-in cooling fan. Features sockets for up to 2Mb of RAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec transfer rate. Autoboots when used with Kickstart 1.3.

only £379.00

A590 512K RAM Upgrade kit £36.00
A590 1Mb RAM Upgrade kit £70.00
A590 2Mb RAM Upgrade kit £135.00
RAM upgrades fitted free when bought with A590.

NEW! Genuine replacement Commodore Amiga P.S.U. £39.95

PRINTERS

All prices include VAT/delivery & cable





We use and recommend Star printers because they offer an unbeatable combination of features, print quality, reliability and value. When buying, please note we are now offering 12-month on-site maintenance contracts for £7.95 extra.

Hugely successful 9 pin printer, the Star LC10 provides 4 NLQ fonts (96 print combinations) at 36cps and 144cps draft. Includes 4K buffer and IBM/parallel interface, front panel operation, plus paper parking, allowing single sheets to be used without removing tractor paper.

Only £159.00
Colour version also available,
Only £209.00
Prices include 2 extra black ribbons free of charge.

Star LC24-10 multifont 24pin printer, super low price £239.00
Star LC24-15 wide carriage version of LC24-10, 200/67 cps £409.00
Star LC15 wide carriage version of LC10, 180/45 cps £329.00
Star LC-10 Mk.II faster version of LC10, 180/45 cps £199.00
Olivetti DM100S 9-pin 10" printer 200/30 cps inc. 1 year on-site warranty ! £129.95
Panasonic KXP1081 reliable + sturdy 9pin 10" printer 120/24 cps £159.00
Panasonic KXP1180 super new feature-packed multifont 9 pin 11" £179.00
Panasonic KXP1124 new good specification multifont 24 pin 11" £259.00
Panasonic KXP1624 wide carriage version of KXP1124 .... £399.00
Epson LX400 (was LX800) 10" 180/25 cps £179.00
Epson LQ550 good 24pin 150/50 cps £349.00
Epson LQ400 new 24 pin 180/60 cps with 8k buffer £229.00

NORDIC POWER CARTRIDGE

Provides the user with a tremendous collection of easy-to-use facilties, whether for general use or for programming. Button-invoked freeze options include a comprehensive machine code monitor; graphics frame grabber with optional printout facility; sound scanner to search, edit and save sound samples; program cruncher to fit more programs on an 880K disk; program backup; plus many more. Unit also features a through-BUS and variable slow motion controller knob.

Nordic Real Action Cartridge £69.00

5.25" External Drive

Our high quality 5.25" drive is capable of a number of configurations including 40 or 80 tracks (360/720K format). Colour matched to the Amiga, quiet in operation, and includes a throughport connector.

£114.95 Including VAT & delivery

PHILIPS 15" FST TV / Monitor (MODEL 2530)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !



£269.00
Includes VAT, delivery and computer connection lead

DATAPLEX

10 Petersfield Avenue, Slough,
Berkshire SL2 5DN
Tel 0753 35557



All prices excluding VAT and delivery

VISA

AMIGA HARDWARE

Amiga Batman Pack	**£317.00**
New Amiga Flight of Fantasy	**£317.00**
New Amiga Batman Plus 5 GamesPack Plus Joystick	**£345.00**

AMIGA ACCESSORIES

A501 - 512K Ram + clock	85.00
TV Modulator	15.00
Mouse Mat	4.00
Amiga to Philips Lead	10.00
Amiga to Printer Lead	10.00
Quickshot II/Stick	10.00

DATAPLEX DRIVES

1MB 3.5" External Drive	68.00
1MB 3.5" Internal Drive	63.00
1MB 5.25" External Floppy Drive	95.00

NEW AMIGA CLASS OF '90'S

Including:
Art & Design feature, Word Processing, Desk-Top Publishing, Spreadsheet, Music, Logo and BBC Emulation ..439.00

PHILIPS MONITORS

CM8833 14" RGB/CVBS mon	199.00
CM 8833 14" RGB/CVBS mon (including cables)	219.00

PRINTERS

Amstrad LQ3500 DI	189.00
Amstrad DMP4000	175.00
Amstrad LQ5000 DI	295.00

DOT MATRIX RANGE

Citizen 120D	120.00
Citizen 180E	127.00
New 24pin swift 24	255.00
Colour upgrade for swift	42.00

All Citizen printers come with 2 year warranty

Epson LX400	139.00
Epson LX850	182.00
Epson FX850	310.00
Epson FX1060	410.00
Epson LQ400	215.00
Epson LQ500	249.00
Epson LQ550	289.00
Epson LQ850	445.00
Epson LQ860	525.00
Epson LQ1060	654.00

HEWLETT PACKARD

Thinkjet	265.00
Quietjet	343.00
Quietjet+	412.00
Deskjet	443.00
Deskjet +	565.00
Paintjet	729.00
Rugged Writer	865.00

All Hewlett Packard printers come with 12 months on site warranty

Star LC10 mono	135.00
Star LC10 Colour	168.00
Star LC24-10	219.00
NEC P2 +	239.00
NEC P6 + 80 character	389.00
NEC P7 136 character	523.00
Colour upgrade kit	69.00
Panasonic KXP 1081	119.00
Panasonic KXP1124	219.00
Sheetfeeder	89.00
Panasonic KXP1624 (132 column)	349.00
Panasonic KXP1180	144.00
Panasonic KXP1595	319.00
Panasonic KXP1540	404.00

NEW MANNESMANN TALLY LAUNCH OFFER

MT81 (dot matrix)	115.00
Sheetfeeder	62.00
Serial I/F	35.00

RIBBONS

KXP1081/1090/1/2	4.00
DMP 2000/3000/3160	2.80
DMP 4000	4.40
PCW 8256/LQ3500	4.50
Panasonic 3131/MP26	4.40
FX800/RX/MX/FX80	3.15
FX1000/FX/RX100	4.40
NL 10	4.40
LQ500/800/850	4.40
LC10	4.40
NEC	5.00

Professional Repairs Carried Out.

NO COMPUTER IS COMPLETE WITHOUT A DUST COVER

Protect your Amiga with a dust cover from the BBD Professional Range.

Made from best quality proofed nylon that has been treated with a flame retardant and an anti-static inhibitor. BBD Dust Covers are tastefully finished with contrasting piping. They never crack, discolour, tear or fade. They can be washed and ironed. So confident are BBD of the quality that they give a no-quibble guarantee with every cover.

BBD dust covers are not expensive and all our prices include VAT and P&P

Amiga 500, Keyboard only	**£5.00**
Amiga 1000, one piece cover	**£8.00**
Amiga 2000, two piece set	**£11.00**

In addition to the above BBD offer a wide range of other covers. These include printer covers from only £5.50
Why not contact us for further details

BBD DUST COVERS

Dept. 34, The Standish Centre, Cross Street, Standish, Wigan, WN6 0HQ



Telephone: 0257 425839 ext 34
Fax: 0257 423909

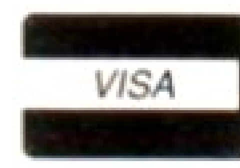


Sheer Perfection in Computer Protection



0530 411485

ASHCOM



0530 411485



YOU NEED 512K NOW HOW MUCH WILL YOU NEED TOMORROW?



THE NEW ASHCOM RAM EXPANSION IS EXPANDABLE TO 1.8Mb

FEATURES:

- ★ Real Time clock/calendar with high capacity Nicad battery backup
- ★ Memory disable switch
- ★ Low power consumption
- ★ Buffered Data Bus (Essential for high capacity Ram boards)
- ★ Plugs in as A501 NO SOLDERING!!
- ★ 12 Months warranty

All prices include VAT and delivery.
Trade enquiries welcome. British made.
Please make cheques payable to Ashcom

ONLY **£89.95** for 512K version.
Expander Board **£19.95**.
Fully expanded to 1.8Mb only **£225**

Rams only **£40** per 512K

ASHCOM 512K RAM EXPANSION WITH REAL TIME CLOCK/CALENDAR ONLY **£54.95**
AND DISABLE SWITCH WITHOUT CLOCK **£47.95**

VIRUS BLOCKER NEW ONLY **£19.95**
PREVENTS THE WRITING OF ALL BOOT BLOCK VIRUSES TO DISK. SIMPLY PLUGS INTO EXTERNAL DISK SKT

Only from ASHCOM, 10 The Green, Ashby-De-La-Zouch, Leicestershire, LE6 5JU
Telephone: (0530) 411485

QUESTION OF SPORT ONLY £4.99

BLOODWYCH + DATA DISC BOTH ONLY £14.99

TURBOSOFT

SIM CITY + TERRAIN EDITOR BOTH ONLY £22.99

Music X + Midi Interface Only £119.99

FORTHCOMING ATTRACTIONS

SlySpy	£16.99
Blue Angels	£16.99
European Superleague	£13.99
Pool of Radiance	£19.99
Shadow Warrior	£16.99
Adidas Golden Shoe	£16.99
U.M.S. II	£15.99
Damocles	£16.99
Myth	£16.99
Blade Warrior	£16.99
Liverpool - The Game	£16.99
Turrican	£16.99
The Punisher	£16.99
Chaos Strikes Back	£16.99
Dynasty Wars	£16.99
Kick Off 2	£12.99
Starflight	£16.99
Last Ninja II	£16.99
Manhunter in San Francisco	£20.99
Back To The Future 2	£16.99
Escape From The Planet Of The Robot Monsters	£12.99
Star Trek V	£16.99
Tusker	£16.99
Verminator	£15.99
Tower Of Babel	£14.99
Barbarian II (Psynosis)	£15.99
Neuromancer	£16.99
Lost Patrol	£15.99
Delta Armalyte	£13.99
Ant Heads Data Disc	£9.99
Bomber Mission Disc	£13.99
Dynamic Debugger	£16.99
F19 Stealth Fighter	£22.99
Final Battle	£16.99
Gin & Cribbage	£20.99
Hammerfist	£16.99
Hot Rod	£16.99
Red Storm Rising	£16.99
Imperium	£16.99

AMIGA EXTERNAL DRIVE
+ Shadow of the Beast, Kick Off, R.V.F. Honda, Battle Squadron.
UNBEATABLE VALUE
@ ONLY £129.99

ACCESSORIES

Mouse Mat 6mm	£3.99
Mouse House	£3.99
Amiga 500 Dust Cover	£4.99
Amiga 4 Player Adaptor	£7.99
Disc Cleaning Kit	£1.99
Naksha Mouse	£29.99
Contriver Mouse	£22.99
40 Lockable Disc Box	£5.99
80 Lockable Disc Box	£7.99
Box 10 Sony Branded Discs	£9.99
Box 10 Bulk Discs	£6.99
Cheetah 125+	£7.99
Quickjoy Jetfighter	£12.99
Navigator with Autofire	£10.99
Speedking with Autofire	£9.99
Pro 5000	£12.99

1 Meg Upgrade Only	£54.99
1 Meg + Dungeon Master	£69.99
1 Meg + Dragons Lair	£79.99
1 Meg + Escape Singes Castle	£64.99
1 Meg + Gold of the Realm	£59.99
1 Meg + Space Ace	£69.99
1 Meg + Roger Rabbit	£59.99
1 Meg + It Came From the Desert	£74.99

TOP 50 CHART

Xenon II	£15.99	Hound of Shadow	£16.99
Klax	£12.99	Untouchables	£16.99
F-16 Combat Pilot	£15.99	T.V. Sports Basketball	£19.99
Gazzas Soccer	£14.99	Dragons Breath	£18.99
Ninja Warriors	£13.99	Manchester United	£14.99
Ghostbusters II	£16.99	Castle Master	£14.99
Operation Thunderbolt	£16.99	Rainbow Islands	£16.99
Chase HQ	£16.99	Player Manager	£11.99
Bomber	£19.99	Leisure Suit Larry 3	£26.99
Cyberball	£12.99	Infestation	£16.99
Iron Lord	£16.99	Conqueror	£16.99
Italy 1990	£16.99	X-Out	£13.99
Midwinter	£18.99	Pipe Mania	£14.99
Hard Driving	£13.99	Pirates	£16.99
Ghouls 'n' Ghosts	£16.99	Lost Dutchmans Mines (1 Meg)	£14.99
Stunt Car Racer	£16.99	Escape from Singes Castle	£26.99
Pro Tennis Tour	£16.99	Risk	£13.99
It Came From The Desert (1 Meg)	£19.99	Knights of the Crystallion	£20.99
Cloud Kingdoms	£14.99	Rotor	£11.99
Jumping Jackson	£16.99	Sherman M4	£16.99
Turbo Outrun	£16.99	Super Cars (Gremlin)	£16.99
Kid Gloves	£14.99	F-29 Retaliator	£16.99
Space Ace	£26.99	Warhead	£16.99
Their Finest Hour	£19.99	Dan Dare 3	£12.99
Ivanhoe	£16.99	Ultimate Golf	£16.99
Colorado	£16.99		

TRIPLE PACK - ONLY £16.99
Hostages, Purple Saturn Day, Kult

MAGNUM 4 - ONLY £19.99
Afterburner, Double Dragon, Operation Wolf, Batman The Caped Crusader

COMPUTER HITS II - ONLY £8.99
Tetris, Black Shadow, Golden Path, Joe Blade

WORLD CUP COMPILATION - ONLY £14.99
Tracksuit Manager, Kick Off, International Soccer

PRECIOUS METAL - ONLY £15.99
Captain Blood, Xenon, Arkanoid II, Crazy Cars

LIGHT FORCE - ONLY £16.99
Bio Challenge, Ik +, R-Type, Voyager

SUPREME CHALLENGE FLIGHT COMMAND - ONLY £19.99
Eliminator, Skychase, Strike Force Harrier, Lancaster, Skyfox II

TRIAD 3 - ONLY £19.99
Rocket Ranger, Speedball, Blood Money

TIME AND MAGIK - ONLY £7.99
Lords of Time, Red Moon, The Price of Magik

WICKED GAMES PACK - ONLY £9.99
Bouncer, Paccie, Backgammon, Invaders, Ball Raider II, Swooper, Spaceballer, Diablo, Zitrax, Othello

● SPECIAL OFFERS ● SPECIAL OFFERS ●

Leaderboard	£6.99	North And South	£9.99	Seven Gates of Jambala	£5.99
Rocket Ranger	£9.99	Pacland	£7.99	Chambers of Shaolin	£5.99
Marble Madness	£7.99	Pacmania	£7.99	Running Man	£4.99
Bards Tale I	£7.99	IK+	£6.99	Bloodwych	£9.99
Dragon Spirit	£7.99	Starglider II	£7.99	Interphase	£9.99
New Zealand Story	£7.99	Conflict in Europe	£7.99	Treasure Island Dizzy	£4.99
Shufflepuck Cafe	£7.99	Seconds Out	£4.99	Gauntlet II	£7.99
T.V. Sports Football	£12.99	Roger Rabbit	£8.99	Spy Vs Spy	£4.99
Galaxy Force	£4.99	Joan of Arc	£7.99	Spy Vs Spy II	£4.99
Sim City	£14.99	Quest for the Time Bird	£9.99	Spy Vs Spy III	£4.99
Casino Roulette	£2.99	Blasteroids	£6.99	Thunderbirds	£4.99
Brian Clough's Football	£6.99	Trivial Pursuits	£9.99	F/ball Manager II + Exp Kit	£12.99
F-18 Interceptor	£7.99	Nebulus	£4.99	Breach	£4.99
Eliminator	£4.99	Cybernoid II	£4.99	Daily Double Horse Racing	£9.99
Fish	£7.99	Netherworld	£4.99	Centrefold Squares	£7.99
Trivial Pursuit New Begin	£6.99	Hollywood Poker Pro	£7.99	Boulderdash Const Kit	£4.99
Super Wonderboy	£7.99	Gold of the Realm (1 Meg)	£7.99	Dynamite Dux	£7.99
Kristal	£9.99	Baal	£7.99	Blood Money	£9.99
Emmanuelle	£7.99	Menace	£7.99	Captain Blood	£4.99
Lords of the Rising Sun	£11.99	Ballistix	£7.99	Barbarian Psynosis	£6.99
Drakken	£14.99	Shadow of the Beast	£16.99	Millenium 2.2	£9.99
Batman the Movie	£7.99	Laser Squad	£8.99	Drum Studio	£4.99
Fernandez Must Die	£3.99	Passing Shot	£4.99	Sidewinder II	£4.99
Flintstones	£4.99	3 Stooges	£9.99		
Hunt For Red October	£9.99	Tank Attack	£7.99		

CLASSIC COLLECTION

Dungeon Master (1 Meg)	£15.99
Dungeon Master Editor	£7.99
Battlechess	£16.99
3D Pool	£13.99
Colossus Chess X	£15.99
Steve Davis Snooker	£13.99
Kings Quest Triple Pack	£24.99
Falcon	£19.99
Flight Simulator II	£26.99
Lombard R.A.C. Rally	£15.99
Operation Wolf	£15.99
Scenery Disk 7, 9 or 11	£13.99
Scenery Disk Japan or Europe	£13.99
War in Middle Earth	£13.99
Airborne Ranger	£15.99
Robocop	£16.99
Waterloo	£15.99
Twin World	£16.99
Kick Off Extra Time	£5.99
Battletech	£16.99
Wayne Gretzky's Hockey	£15.99
Deluxe Scrabble	£13.99
Dragons Lair (1 Meg)	£26.99
Bards Tale II	£16.99
Ferrari Formula 1	£16.99
Grand Prix Circuit	£16.99
Sword of Sodan	£16.99
Ultima IV	£16.99
Zak McKraken	£16.99
Forgotten Worlds	£13.99
Maniac Mansions	£16.99
Test Drive II	£16.99
Shoot 'em Up Construction Kit	£19.99
Balance of Power 1990	£19.99
R.V.F. Honda	£16.99
Indy Jones The Adventure	£16.99
Kick Off	£12.99
Falcon Mission Disc	£13.99
Populous	£16.99
Populous Promised Lands	£7.99
Altered Beast	£11.99
Super Cars (T.D. II Disc)	£8.99
California Challenge (T.D. II Disc)	£8.99
Muscle Cars (T.D. II Disc)	£8.99
Austerlitz	£16.99
688 Attack Sub	£16.99
Battlehawks 1942	£16.99
Elite	£12.99
Gunship	£12.99
Microprose Soccer	£12.99
Carrier Command	£12.99
Fiendish Freddy's Big Top Fun	£16.99
Continental Circus	£11.99
Dragons of Flame	£16.99
Keef The Thief	£16.99
Borodino	£19.99
Demons Tomb	£12.99
Hillsfar	£16.99
Gold of the Americas	£16.99
Leisuresuit Larry I	£16.99
Leisuresuit Larry II	£19.99
Space Rogue	£18.99
Horse Racing	£16.99
Heroes of the Lance	£16.99
Manhunter in New York	£19.99
Omega	£19.99
Pictionary	£16.99
Postman Pat	£6.99
U.M.S.	£16.99
Virus Killer	£7.99
Vulcan	£16.99
World Tour Golf	£7.99
Red Lightning	£19.99
Full Metal Planet	£16.99
European Challenge (T.D. II)	£8.99
Tracksuit Manager	£13.99
European Space Shuttle	£24.99
The Cycles	£16.99
Bridge Player 2150	£19.99
Times of Lore	£16.99

ART & SOUND

Studio Magik	£52.99	Deluxe Video III	£59.99
Fanavision	£24.99	Deluxe Music Cons.Set	£49.99
A.M.O.S.	£34.99	Deluxe Paint II	£7.99
Photon Paint II	£22.99	Studio 24	£134.99
Deluxe Paint III	£59.99	Track 24	£59.99
Deluxe Print II	£34.99	Mastersound	£32.99

UTILITIES & BUSINESS

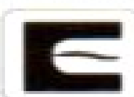
A-Max (Mac-Emulator)	£109.99	Mavis Beacons Typing	£19.99
A-Max with 128K ROMS	£209.99	Kindwords	£37.99
DevPac II	£44.99	Protext V.4	£59.99
Digicalc	£27.99	Pagesetter	£89.99
Hisoft Basic	£59.99	Transport Controller	£149.99
Lattice C V.4	£164.99	Draw 2000	£189.99

EDUCATIONAL

Discover Chemistry	£13.99	Fun School II 8+	£12.99
Discover Maths	£13.99	Kid Talk	£24.99
Discover Numbers	£13.99	Math Talk	£24.99
Discover the Alphabet	£13.99	Discovery Maths	£24.99
Fun School II (under 6)	£12.99	Discovery Words	£24.99
Fun School II 6-8	£12.99	Discovery Trivia	£24.99

Please note that not all forthcoming attractions are released at the scheduled time. These will be despatched within 24 hours of release, subject to availability.

41 SOUTH STREET, LEIGHTON BUZZARD, BEDS, LU7 8NT TEL: 0525 377974 FAX: 0525 852278

ORDER FORM   

Please supply me with the following for

Computer ....

Titles	Price

DATE: ....

NAME: ....

ADDRESS: ....

....

....

..................Post Code..................

TEL: ....

AMIGA FORMAT JULY '90

Please make cheques & PO payable to ***Turbosoft***

Orders under £5 please add 50p per item. Over £5 p&p ***FREE*** *in UK. Elsewhere please add £1.50 per item.*
N.B. Please state clearly mode of computer & also cassette or disc when ordering

EALING
COMPUTER CENTRE

NOW! FREE DELIVERY ALL ITEMS!

No. 1 place for AMIGA COMPUTERS in West London. All prices inc.V.A.T.

This Months Special Promotions

BUSINESS COLLECTION
AMIGA: KIND WORD 2, K-DATA, K-SPREAD 2
£69.99

3.5" EXTERNAL DRIVE 1MB (NEC / CHINON) SWITCH, THRU PORT
£63.99

Hardware

Amiga 500 Batman Pack	£375.99
Amiga 500 Flight of Fantasy	£375.99

ALL WITH 4 TITLES, TV MODULATOR, MOUSE.

Monitors (WITH AMIGA CABLE)

Philips 8833 Colour Stereo	£299.99
Commodore 1084 Colour Stereo	£239.99

Drives (EXTERNAL)

Cumana 1Mb Drive 3.5"	£79.99
3.5" 1Mb Drive (NEC/Chinon)	£63.99
Amiga 20Mb Hard Disk Drive (incl. 3 software titles)	£369.99
5.25" Drive (NEC/Chinon) 1Mb	£119.99

Accessories

Amiga Mouse	£24.95
Memory Upgrade 0.5Mb	£49.99
As Above with Clock	£55.99
Power Supplies	£39.00

Printers (ALL WITH CABLES) ALL UK SPECIFICATIONS

Mannesman Tally MT81	£134.95
Star LC-10	£159.99
Star LC-10 MKII	£198.99
Star LC-10 Colour	£209.99
Star LC-24-10	£239.00
Panasonic KXP1180	£169.99
Panasonic KXP 1124	£269.99

Software

Photon Paint 2	£14.09
Spritz (Graphic Soft)	£9.99
Tenstar Pack	£29.99
Kind Words 2	£29.90
Superbase	£29.90
K-Data	£26.90
K-Spread 2	£26.90
K-Graph 2	£26.90

Business Collection:
Kind Words 2, K-Data, K-Spread 2....£69.95

19 Queens Parade, Ealing, London W5 3HU. Tel 081-991 0928

Prices include delivery for software and small items Courier Delivery of hardware £7.99. UK mainland only ★ Above prices for mail order. Shop prices may vary ★ All offers subject to availability. E&OE. We are the corner of Hanger Lane (North Circular) & Queens Drive ★ Easy parking ★ Most models in stock ★ **VISA AND ACCESS**

10 DISKS 3.5" ONLY DS DD £4.99 with any purchase. Lowest price in U.K?

MISTRAL COMPUTER SUPPLIES
0705 453814

Mail Order — Mail Order

AMIGA SOFTWARE

F29 Retaliator	16.99	SuperCars	13.99
Dragon's Breath	19.99	Cyberball	13.99
Gravity	16.99	After the War	13.99
Warhead	16.99	First Contact	16.99
Ninja Spirit	16.99	Tower of Babel	13.99
Rainbow Island	16.99	Full Metal Planet	13.99
Xenomorph	16.99	Renaissance	13.99
Hyperaction	16.99	Manic Miner	6.99
Fire Brigade	19.99	Infestation	16.99
Man United	13.99	Dungeon Quest	16.99
Pipe Mania	16.99	Gazzer Soccer	16.99
Supreme Challenge	19.99	Xenon II	16.99
Space Rogue	19.99	Dragon of Flame	16.99
Third Courier	13.99	Super Wonderboy	16.99
Cyberball	13.99	Beach Volley	16.99
Chronoquest II	19.99	Turbo Outrun	16.99
Kid Gloves	16.99	Kenny Dalglish II	19.99
Budokan	**16.99**	Dragon Spirit	13.99
World Boxing Manager	13.99	Fast Lane	13.99
Chess Player 2150	16.99	Best Man	16.99
Escape from Singes Castle	34.99	New Zealand Story	16.99
TV Sports Basketball	19.99	Stunt Car Racer	16.99
P47	16.99	Shadow of the Beast	24.99
Crossbow	13.99	Sim City	19.99
Scrambled Spirits	13.99	Ninja Warriors	13.99
Risk	13.99	Ghostbusters II	16.99
Hunter Killer	3.99	Chase H.Q.	16.99

★★★★★ AMIGA HARDWARE ★★★★★

Amiga Bat Pack	Phone
Amiga Flight of Fantasy Pack	359.99
Above with Tenstar Games Pack	379.99
A590 Hard Drive 20Mb	352.99
Cumana External Drive	79.99
A501 512k RAM exp.	89.99
Trapper 512k RAM exp. with clock	65.00
1084S Colour Monitor	247.99

3.5" Disks unbranded Sony, boxed and fully guaranteed.
10 .... 65p each — 50 plus .... 60p each



Please Send Cheque/PO to: **Mistral Computer Supplies, 42 Park Way, Havant, Hants, PO9 1HH.**

VISA

Add £5 per item of hardware to cover postage & packing.
Send for full software and hardware list. All formats available.

FIRST CHOICE COMPUTERS

TEL: **LEEDS** (0532) 637988

UNIT 8, ARMLEY PARK COURT, STANNINGLEY ROAD, LEEDS LS12 2AE

ALL PRICES INCLUDE VAT & DELIVERY. ALL OUR PRODUCTS ARE UK SPECIFICATION

STAR LC10 MONO
9 Pin Printer Inc Lead
£159.00

IN STOCK NOW!!
AMIGA FLIGHT FANTASY PACK
Inc. F-29 Retaliator!! Rainbow Islands, Escape from the Planet of the Robot Monster, Deluxe Paint 2, Mouse Modulator. Add £25.00 for Batman + F-18 Interceptor.New Zealand Story Add £20.00 for 10 Star Pack **£369.00**

PHILIPS CM8833
Stereo monitor inc lead
£249.00
Commodore 1084S Stereo Monitor inc Lead
£239.00

AMIGA 1 MEG
Memory Expansion inc real time clock
PHOTON PAINT 2 ONLY £15.00 when you buy 1 Meg Ram Expansion.
£64.99

PRINTERS (inc lead)

StarLC10 MK II	£184.00
Star LC10 Col	£209.00
Citizen Swift 24 pin	£299.99
Colour option for Swift	£34.99
NEC P2+ 24 Pin	£299.00
Star LC24/10 24 pin mono	£249.00

DISK AND HARD DRIVES

Cumana Amiga 3.5 1 Meg	£84.99
Senator Amiga 3.5 1 Meg	£79.00
Amdrive 30 Meg Hard Drive	£389.00
Amdrive 50 Meg Hard Drive	£459.00
Com A590 20 Meg Hard Drive	£376.00
Powerdrive 3.5 1 Meg	£76.99

COMPUTERS

Amiga Batpack inc Deluxe Paint 2, Batman, F18 Interceptor, New Zealand Story, Mouse, Modulator and manuals.
£369.00
Amiga Batpack plus 10 Star games pack
£389.00
Amiga A500 inc mouse, modulator, manuals
£349.00

ACCESSORIES

Naksha Mouse	£39.99
Scart Leads	£9.99
Printer Leads	£5.99
100 Capacity lockable 3.5 disk boxes	£7.99
10 Capacity boxes	£1.99
50 Capacity lockable 3.5 disk boxes	£5.99
Amiga dust covers	£4.99
Star LC10 cover	£4.99
14 inch monitor cover	£6.99
12 inch monitor cover	£5.99
Universal printer stand	£9.99
Mouse pads	£4.99
Mouse holder	£1.99

AMIGA BOOKS AT DISCOUNT PRICES

Amiga Hardware Ref.	£21.49
Amiga Basic Inside & Out	£17.99
Amiga Tricks & Tips	£14.49
Amiga C For Beginners	£17.99
Amiga Machine Language	£14.49
Second Book Of Amiga	£16.49
Amiga Dos Reference Guide	£14.99
First Book of Amiga	£16.49

THIS IS ONLY A SMALL SELECTION

SOFTWARE SPECIAL OFFERS

Deluxe Paint 2	£14.99
Photon Paint 2	£24.99
F18 Interceptor	£9.99
New Zealand Story	£9.99
Batman The Movie	£9.99
10 Star game pack	£39.99
Fantavision	£19.99
Comic Setter	£19.99
Kind Words V2	£38.99

OTHER DISCOUNT SOFTWARE

Protext WP	£74.99
Publishers Choice DTP	£74.99
Mavis Beacon Typing	£24.99
Devpac 2	£49.99
GFA Basic Interpretor	£39.99
GFA Basic Compiler	£25.99
AMAS Midi Sampler	£84.99
Audio Master 2	£59.99
Doctor T's Midi Recording Studio	£49.99
Doctor T's Copyist Super	£79.99
Deluxe Music Construction Set	£54.99

DISKS

100% ERROR FREE LIFETIME GUARANTEE 135 TPI 3.5 INCH

SONY BULK		
10	For	£6.99
50	For	£31.99
100	For	£59.99
200	For	£115.99
300	For	£158.99
500	For	£254.99
1000	For	£499.99
MITSUBISHI BULK		
10	For	£5.99
50	For	£27.99
100	For	£49.99
200	For	£97.99
300	For	£142.99
500	For	£229.99
1000	For	£449.99
DISK LABELS		
500	For	£7.99
1000	For	£13.99

OPEN 9.00AM TO 5.30PM MONDAY TO SATURDAY OPEN SUNDAYS 10.00AM TO 3.00PM .OPEN THURSDAY 'TILL 8PM
FOR THE BEST PRICES, BEST ADVICE AND THE BEST SERVICE, YOUR ONLY CHOICE IS FIRST CHOICE.
Call into our showroom or order by telephone for a fast delivery Tel: 0532 637988 Fax: 0532 637 689
Please make cheques payable to First Choice

VISA — Access

Letters

Address your communications to **BOB WADE** at **30 Monmouth Street, Bath, BA1 2AP.** If it's good enough to be printed and escape the Origami treatment it could win you a T-shirt and binder.

Manual Hassles

I have recently purchased the database *Acquisition 1.3*. This was reviewed in *ST/Amiga Format*, which contained an excellent review and also stated that a free 500 page tutorial would be available free if necessary. After receiving the database, I contacted the suppliers with reference to the tutorial. The reply was that they had never heard of the offer.

After this rebuff I contacted the publishers of the program, Taurus. Their reply was that they no longer supported the database as it was nearly three, years old.

So I have finally decided to write to *Amiga Format* in the hope you will publish my plea for any kind, database *Acquisition 1.3* owner, who would kindly loan me a copy of the free tutorial. This would enable me to start using the above database.

BW Hudson
32 Westmorland St
Balby
Doncaster
Yorkshire DN4 9AD

We don't have a copy of the tutorial unfortunately, but if you've got one then why not take the time to help Mr Hudson out?

What's in a Game?

We all want good games. But what exactly is or are the elements which make a game good?

The game has to be absorbing and addictive, graphics and sound of a high quality do help enhance a game, but are not essential. This was shown by a great game called *Laser Squad*. Graphics and sound are not exactly breathtaking, but it's an excellent game nonetheless. Too often we are given a game with no gameplay whatsoever, best examples here are *Dragon's Lair* and *Space Ace*, both sheep in wolves clothing.

Difficulty level also dictates whether a game is good or bad. OK, so the game may be enjoyable while it lasts, but do you like paying 25 quid for a game which will only last a few days? Take *Robocop* as an example here. The graphics serve their purpose, and so does the sound, but the difficulty level is set way too low.

The overall game itself may have benefitted from shorter time limits, fewer rounds of ammo in extra weapons, or more energy taken away from *Robocop* with every hit.

This may make things a lot harder for someone who is only starting out on playing *Robocop* and it is easy for a person like myself to say things like this about the game because I completed it, but surely, if hackers or crackers can write cheats to make a game easier by providing infinite energy, longer time limits etc, then wouldn't it be fair to say the opposite can be done, to provide lasting challenge to try to beat the game on a harder level?

But why should it be up to the computer users to do these things? I would personally like to request software houses to return to one of their nicer practices in the far gone days of home computer games playing. Would you please include a difficulty level setting which the player could select him/herself so that when an easier level has been chosen, a harder one could be used after the easier one was completed? Such a feature could add extra life to games, even shoot-em-ups, that would otherwise be collecting dust on the gameplayer's shelf.

Jonathan McBrien
Enniskillen, Fermanagh

The course you suggest for solving the problem is a dangerous one because it can far too easily be seen as a cop-out for the programmers – instead of working on more levels, features, puzzles etc, they will just opt for stepping up enemy fire rates and so on. Yes, I think more attention should be paid to long-term lasting interest (we're talking months here), but it should be through superior design not toggling difficulty levels.

Oh, no! It's the Pathetic Pirate!

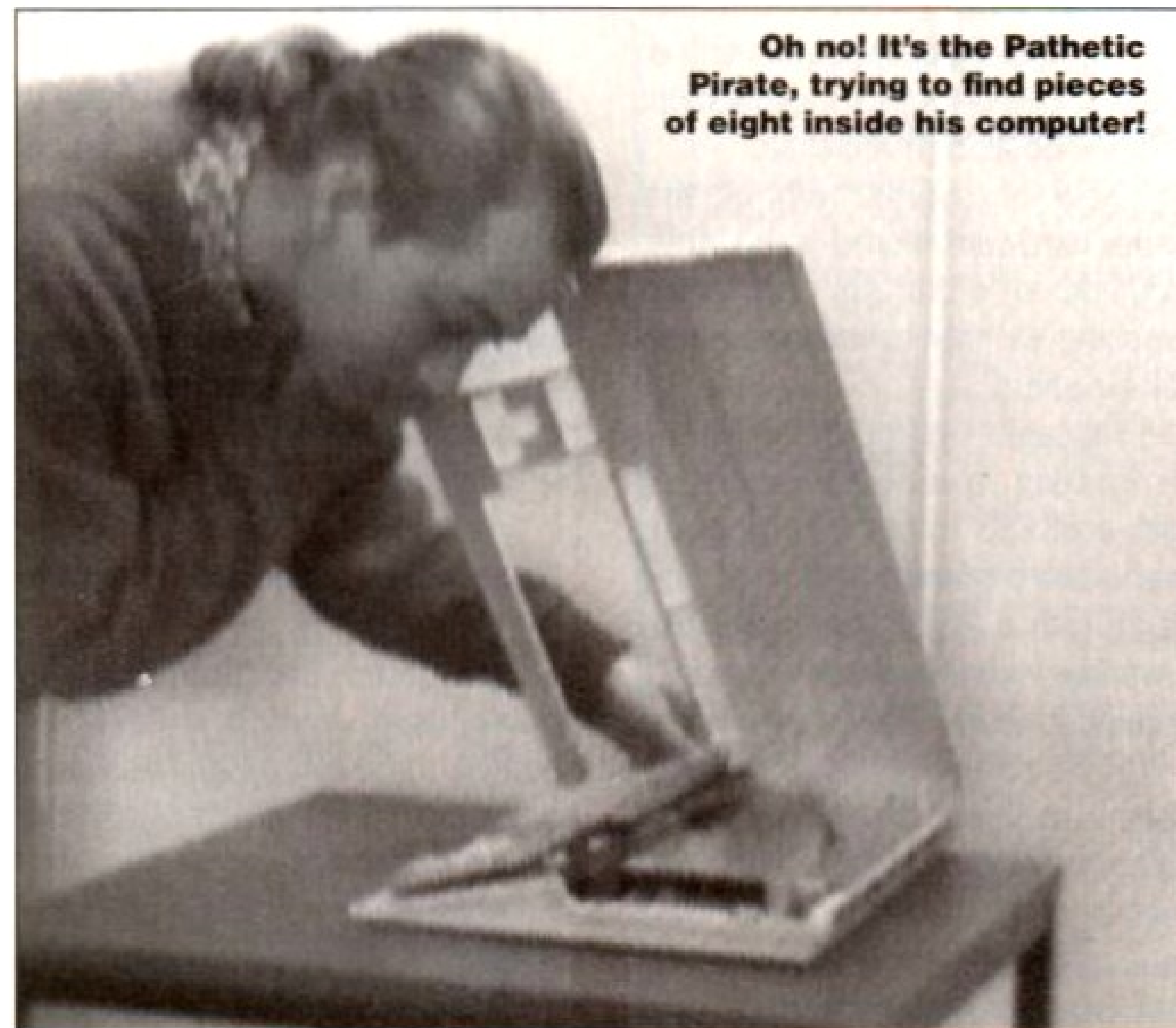
I have been a pirate since the early days, and I have been and still am very disappointed with the state of affairs surrounding the computer industry.

I bought my first computer, a Commodore Vic 20 not soon after it was launched, and started my days of piracy from there, but to no avail – I couldn't find any of these fabled pieces of eight in my 8-bit machine. Assuming someone else had stolen my treasure I decided to try a machine that claimed to have 64 pieces of 8, but when I hacked apart my brand new Commodore 64, I found that the same fate had taken place (blasted pirates, no doubt).

Anyway I decided to give it one last try and your magazine seemed to provide the perfect opportunity. I rushed out and bought some of the software that you claimed had some Gold Disks enclosed. When I got home and ripped the plastic envelope open only to find a round flexible piece of plastic with a hole and a funny piece of metal on it (which proved to be worthless when I had it valued). What a con. Just goes to show how pointless piracy is, I'll never get rich like this.

The Unsuccessful Pirate
Enfield, Middlesex

I'm frankly surprised they let you have computers where you are, you might try to electrocute yourself by sticking your tongue in the disk drive.



Oh no! It's the Pathetic Pirate, trying to find pieces of eight inside his computer!

Cyber Correction

Your article on Multimedia stated that AutoDesk had spent millions of dollars developing cyberspace and that they ran on mini systems. Autodesk in fact demonstrated cyberspace hooked up to a bicycle at the 1989 expo at the Anaheim conference centre in California. They announced at the time that the entire research project had cost a mere £26,000, a mere binary digit in computer terms. This is mainly due to the fact that it runs predominantly on existing hardware, top end PCs and not as was stated mini systems. I have my doubts that cyberspace will ever be available on such low-power machines as currently saturate the home market but with the recent release of the Intel 486 chip and ongoing development of the 586 I believe it could be a realistic proposition to

see cyberspace making a real appearance in the PC world within the next five years.

Darren Plumridge
Reigate, Surrey

Back UP? Back OFF!

As a programmer I would like to address all those wingeing would be pirates, oh sorry, I mean disk backeruppers, who can't find a decent backerupper program. IF YOU CAN'T 'DUPLICATE' IT FROM THE WORKBENCH MENU OR 'DISKCOPY' IT FROM CLI, THEN IT IS NOT MEANT TO BE BACKED UP. I suggest that you (would-be backeruppers) write to the software companies in question and ask their permission to backup their software and how to do so.

Melville Carrie
Pittenweem, Fife

Before anybody else says it, I will – most games don't have a backup option – this is not a good thing, particularly in the age of viruses. It would involve extra programming to alter protection techniques but surely it's worth doing for the customer's sake.

Big Amiga Offer

About a month ago, Commodore had the decency to give my postman a little letter to give to me telling me that my precious Amiga 500 was worth 1200 quid!! Sounds bloody nice, I thought, what's the catch? Did you get one too? Well, you probably know then, that this is an offer brought to you exclusively from Commodore to try to get you to get rid of your A500 or A1000 and get an A2000 for the lovely price of 1099 zords.

What do Commodore do with these A500s when they get their mitts on them, I wonder? Is this how they can afford to give such big-value bundles such as the Batman Pack, by recycling old A500s? Sorry for sounding so sceptical, Commodore, but it could be done, I suppose.

The option of upgrading to an A2000 for £1099 is quite nice, but I don't have that sort of money at the moment, and I most definitely don't want to give away my A500.

Does Commodore not think that instead of giving unregistered users £1200 for their A500, giving them a free memory upgrade or second disk drive, or even Checkmate's A1500 upgrade would be more useful?

This would enable all Commodore worshippers to keep their machines up to today's demanding specification, it would also be more accessible to registered owners. All the same, I think this was a very generous offer by Commie, but like many other A500 and A1000 owners I am going to say "Thanks but no thanks".

Jonathon McBrien (again!)
Enniskillen, Fermanagh

It's nice to see Commodore offering what amounts to a discount to existing owners of Commodore equipment. I also think it would be good to offer a trade-in on 64s and 128s so that owners of them could upgrade to the A500. Brand loyalty was always one of the strong points of Sinclair's computers and Commodore could do a lot worse than to try to encourage the same sort of loyalty in all of us Commodore owners.

By Special Request

Now although there have been requests for some hardware projects after this issue I thought I would write and let you know about the things that I would like to see printed.

I thought that a good, but simple start and a build up to something more complex would be a good way of going about it so here are my ideas.

To start I thought we could build a sort of expansion card that would allow 8 megabytes of standard D-RAM chips to be fitted to my Amiga 2000, to simplify this we could make it unpopulated.

Once this had been achieved maybe a simple SCSI type of interface would be in order so we could go onto that, or maybe something really adventurous and combine the interface with the unpopulated expansion card.

Then of course as a virgin SCSI interface is not much use we could make up our very own hard drive say about 40 Gigabytes, nothing too big as we are just beginners at the moment.

With this out the way we could build a small multi-font Laser Printer, that supports some kind of Hewlett and Packard emulation, with full postscript facilities.

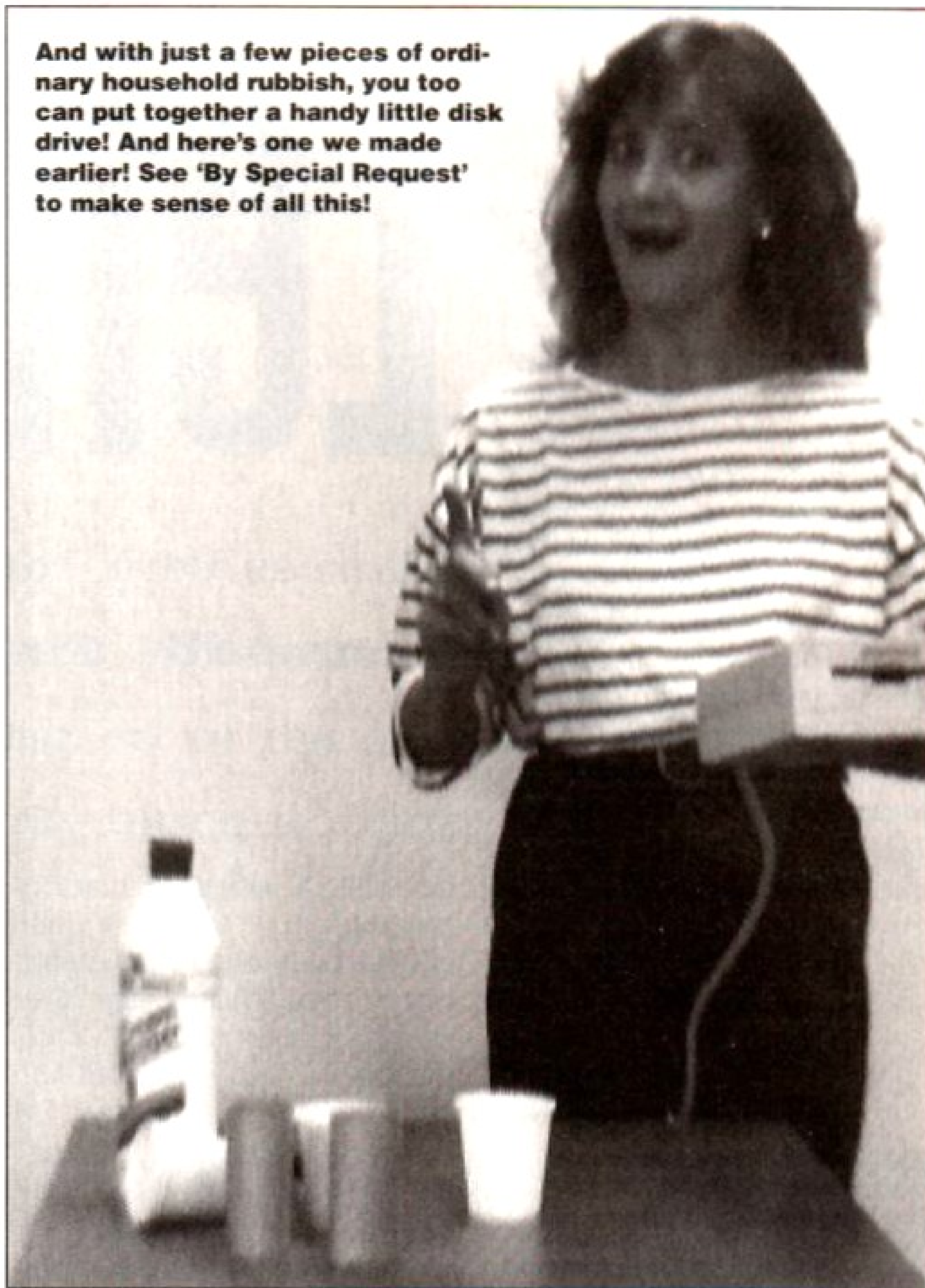
Now of course with all this extra hardware some extra RAM may be in order so how about teaching us how to make our own D-RAM chips.

I thought we could then go on by making a 68030 processor with a 68883 maths co-processor and a 24 bit frame buffer, all this along with a 21 bit digitizer would probably satisfy my curiosity enough to learn about electronics.

Perhaps you could even introduce some of the elements of electronics along the course of events, maybe you might be able to explain what a resistor does and why we use capacitors, and how many Ohms you can buy for £5.00, anyway in short nothing too complicated.

S K Hussain
Edmonton

Hmm. What mystifies me is how anyone ever persuaded you to buy an Amiga – surely you could have knocked one up in the garden shed on your own? Or maybe you did. Anyway, as soon as you have Very Large Scale Integration, the brain-like chip and room-temperature superconductivity, get in touch with me. I woud like to be your agent, and I'll only charge a small percentage fee…



And with just a few pieces of ordinary household rubbish, you too can put together a handy little disk drive! And here's one we made earlier! See 'By Special Request' to make sense of all this!

What is a Virus?

1) What is a virus (apart from a minute non-cellular particle which reproduces in living cells)?
2) How do they reproduce?
3) Just how many types are there?
4) My local computer shop owner says that a virus cannot remain in the computer if it is switched off for 30 seconds – is this true?

I Smith
Peterlee, Co Durham

1) A program that automatically copies itself from one disk to another, most often with the intention of corrupting in some way the disks it gets onto.
2) By copying themselves.
3) There are tens of types and new ones appear all the time.
4) Absolutely true – which makes it the best way to avoid spreading a virus from one disk to another.

My 64 is the Best

The fact is that games for the C64 often beat Amiga games hands down for playability. One example of this is *Speedball*. I have *Speedball* for both formats, and thoroughly loved it on the C64 but not favoured the Amiga version.

I know I'm not alone with this discontent, and at £25 this makes me even more pissed off. One reason for our discontent is the inclusion of the mouse in many games. The user feels in far greater control of the game if he is using the keyboard ie *Football Director II*. (I played this on an IBM PC).

Mark Dawson
Ardbeg, Arquil

There are games available and more arriving on the Amiga that are impossible on the 64 – and I'm not just talking about graphics and sound, but gameplay as well.

As for control methods, it's a case of horses for courses: the mouse is good for Virus, Ferrari Formula One *or* Operation Wolf, *joystick for most shoot-em-ups and platform games, and keyboard for isometric 3D, some driving games and many other types. I'm happiest when offered a choice between the three so I can make my own mind up.*

Mail Order Made Easy

G L Murray with 'Trouble in the Mail' (Issue 10) could have saved himself trouble and £17.90 if he had used a credit card. Credit card companies form part of the transaction and so are just as responsible to the customer as the salesman. All he needed to do is contact his card company and they would see that he would not be out of pocket and they then would go after Megasave. When buying mail order, especially from dubious magazines such as *AF*, I always use credit where my limit allows (but don't forget to pay when the statement comes through eh!)

Mike Robinson
Southsea, Hants

DUBIOUS! Just what, exactly, to be precise, in a nutshell, without beating around the bush or extrapolating the facts to the nth degree of complication is that supposed to mean? Are you casting nasturtiums on our character, or sexuality, or even that it's dubious whether we're a magazine? I'm so devastated I'm going to the pub for a pint or six.

PS Good advice about the credit card.

On the same subject...

Computer Comparisons

I've owned a real menagerie of computers over the years. First there was the obligatory ZX81, with the scariest computer game ever – *3D Monster Maze*, with Mazogs coming close. Then the old Speccy came (well, four of them to be precise), with the best game ever – *Chaos* – and those wonderful *Cuchulain* adventures by Gargoyle games, resulting in the second best game ever – *Heavy on the Magick*.

Then I got an ST, with the classic *Carrier Command* and... er... oh! *Dungeon Master* (how could I forget?) And now, for various reasons, I have an Amiga. Before I go any further, I'd like to point out that this is not a letter bemoaning the state of the software produced today... well, not really. In fact, the last thing I like to read about in a letters page is someone complaining that the latest technological feat (with x man/woman years put into it) isn't as addictive as *Death Race 2000* on the '81. True, I found *Zynaps* on the Spectrum as addictive as *Xenon II*, but so what? I enjoy playing the latter, which is why I bought it.

I think people tend to get so used to technology these days. I mean, when I look at *Retaliator*, I can think to myself "Wow! the speed of this is the sort of thing you dreamed of when playing *Fighter Pilot* on the Speccy." and then you realise just how much of an advance 16-bit computers are.

Even so, I still think the ST and Amiga aren't being used as well as they could. *Retaliator*, for example, is very good in parts, but doesn't live up to the hype – it could have been so much better. Still, the most eagerly awaited game this year is *Lords of Chaos* – for the Spectrum, although the 16-bit versions have the potential to be far superior.

Undoubtedly, the best 16bit game so far has to be *Tower of Babel*. Well done Pete Cooke! Now, this man knows how to write an addictive game. Is someone going to organise a tower designing competition? I have some vicious towers to unleash upon the unsuspecting!

Another highly addictive game is *Impossamole*, providing that old ideas can still work when executed effectively.

Adam Britton
Horbury, West Yorkshire

I love a bit of nostalgia too and there were some great games on virtually all the computers there have been. However, it's dangerous to get too nostalgic because when software houses latch onto an game style as being popular they tend to do it do death – witness beat-em-ups, shoot-em-ups, Breakout games etc. It's nice in small doses but let's not stop the boundaries being stretched.


'Computer Comparisons' – all these machines, binned in favour of the Amiga!

Mail Order Bargains

The letter from Mr G Murray was very sensible and thought provoking. He was right to state that some (but thankfully not all) Mail Order Companies seem to rip off their potential customers and really they are only doing self-inflicted harm.

If four people buy a £25 Amiga game each and have to wait two months before receiving it, the company (which certainly never hesitates to bank all received cheques) will gain a fair amount of interest on this £100. Remember that possibly hundreds of people use Mail Order advertisements and even if they only ever order a single game, a vast sum of money exchanges hands.

One major company (which shall remain nameless to save embarrassment) contained, I counted, over 25 unreleased games in a single advert!

This, however, is not solely the fault of the Mail Order Companies and some blame must fall upon the software houses themselves. It is they, after all, who place game advertisements many months before their release dates and there are sometimes problems in the programming developments, which naturally cause severe delays. Hundreds of eager gamesplayers must wait a couple of months for a game which, even after all the hype and hopes, may be rubbish anyway.

Instead of advertising games which are still halfway through being programmed, companies should save their money and use it to either fund the game or a future release. I know adverts are booked a long time in advance, but there is really no excuse for this type of sloppy behaviour.

Stuart Neil Hardy
Wales, Sheffield

A Good Idea?

A thought. Just occasionally, instead of putting a demo on your Coverdisk, why not put a complete game? It could either be something from PD, (as you did with *Yelp* sometime ago), or perhaps something from software houses, albeit an old game. There must be loads of games still around that one or two years ago were big news, but can't be given away.

Either solution would be better than playing one level of a demo for a while and then trashing it.

Tony Harrison
Basildon, Essex

We put the occasional full PD game on but disk space means they have to be fairly simple. Most back catalogue games from software houses are not available to us because if they are any good they are more likely to end up on compilations or as budget software. Besides which, I think most people, like myself, would rather keep up to date with what's happening now, rather than games that are a couple of years old.

New Owner Asks

I have been the proud owner of a Amiga 500 for two weeks now and I am still totally confused in the work of the Amiga. I have a few questions which I will be very grateful if you could answer.

1) Is it normal for the disk drive to make so much noise when operating?

2) Is it worth upgrading my Amiga to 1 meg and what is the cheapest one I can buy?

3) What is the difference between High density and double density disks and which one can I use?

Anoop Sharma
Thornton Heath, Surrey

1) It does make a noise, which varies between machines, and you should not worry about it unless you start having trouble with disks.

2) It's worth getting the upgrade if you need it to run particular bits of software. As for price, just check out all the ads in this issue because there are lots of different deals being offered. The cheapest boards will be the ones without additional expansion slots for more than the one meg.

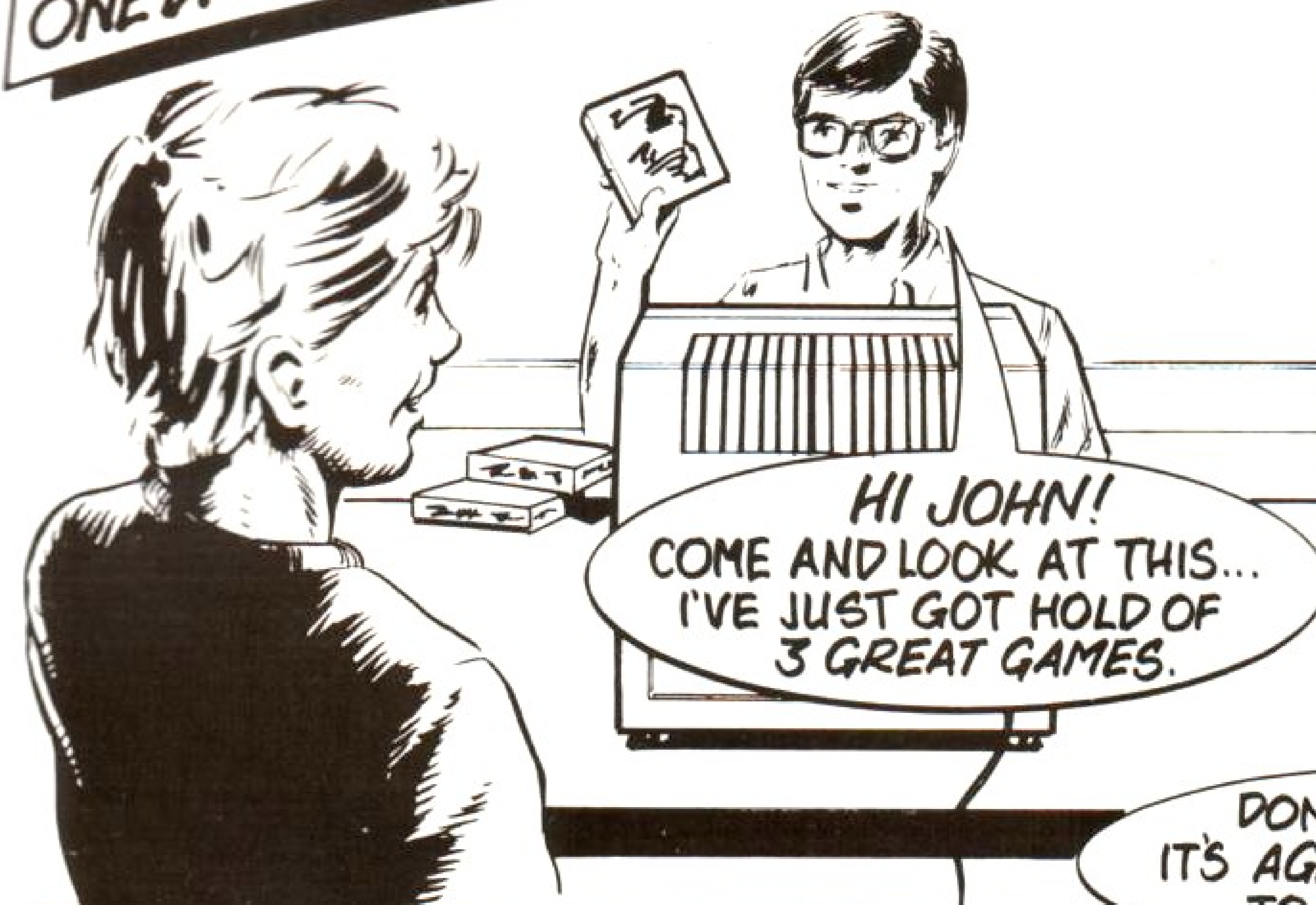
3) I'm a bit fuzzy on the difference between high density and double density disks and drives – something to do with magnets, different formats or the price of crisps in Ipswich. However, what I do know is that you can only use double density disks, high density ones will not work.

What do Women Want?

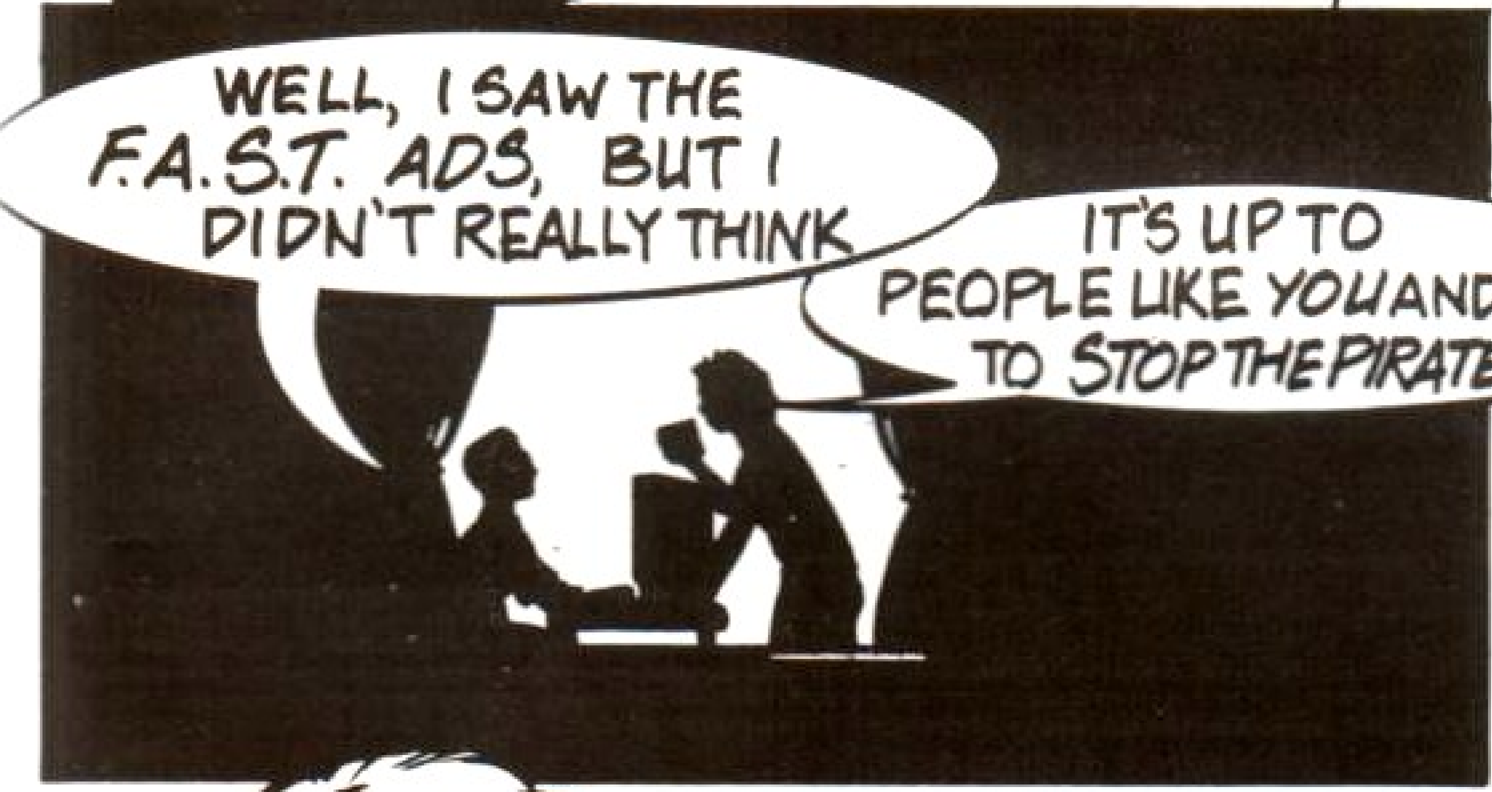
I am writing in response to Mrs Burns ("Female Format", Issue 9) She asks for more reviews and software for female Amigans(?) and for manufacturers to take note, but a thought occurred to me. Do they know what we want?

I am not in the slightest bit interested in street-fighting games, commando games like *Platoon*, space fighting games or strategic war games. My games collection consists of:

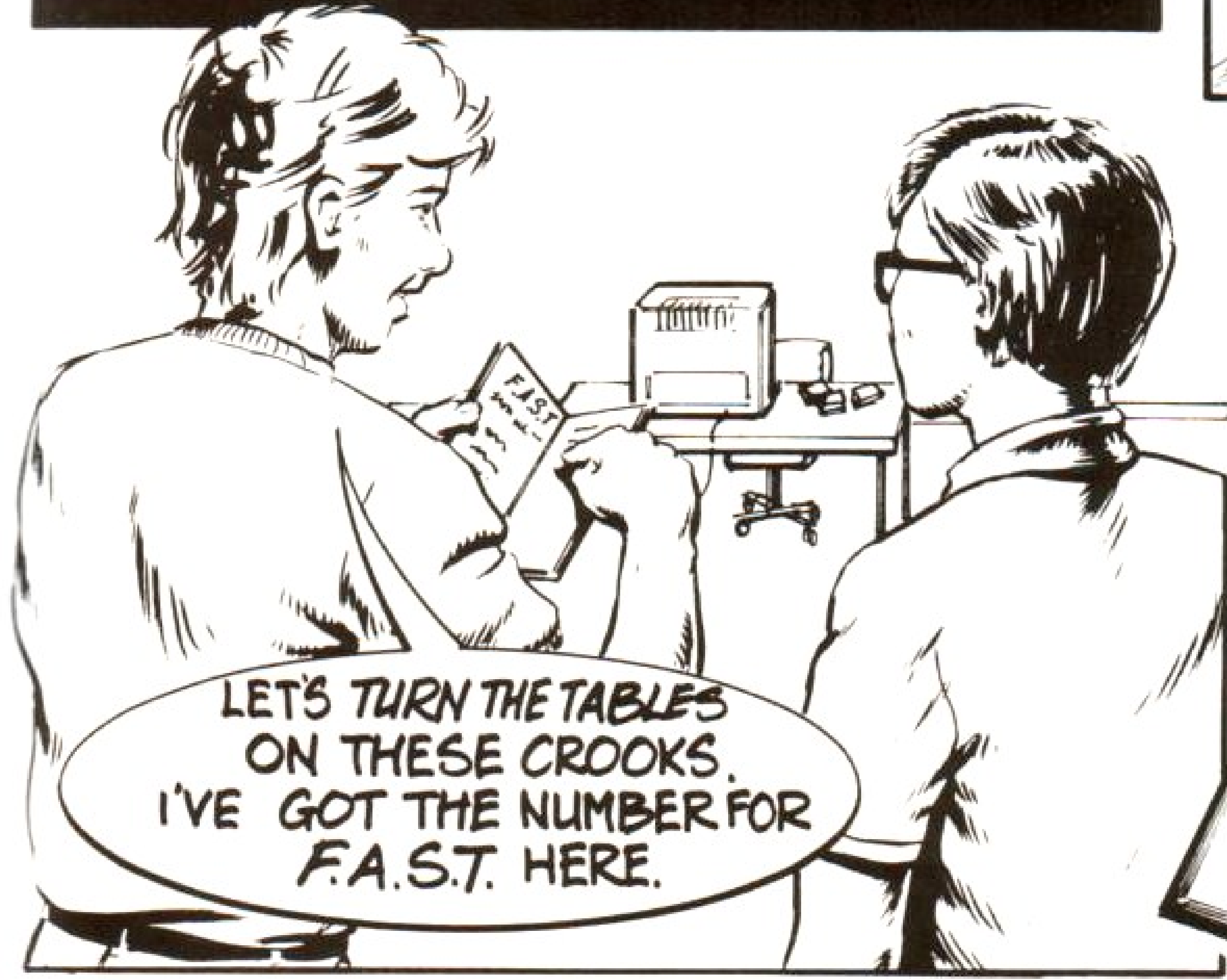
- *Skweek* (which I like but has a disastrous disk access – is that why it's called *Skweek*?)
- *Arkanoid*
- *New Zealand Story* (haven't managed to get out of the whale yet)
- *Pacmania* (I've never got to the fourth level 'cos it's too hard)
- *Amegus*

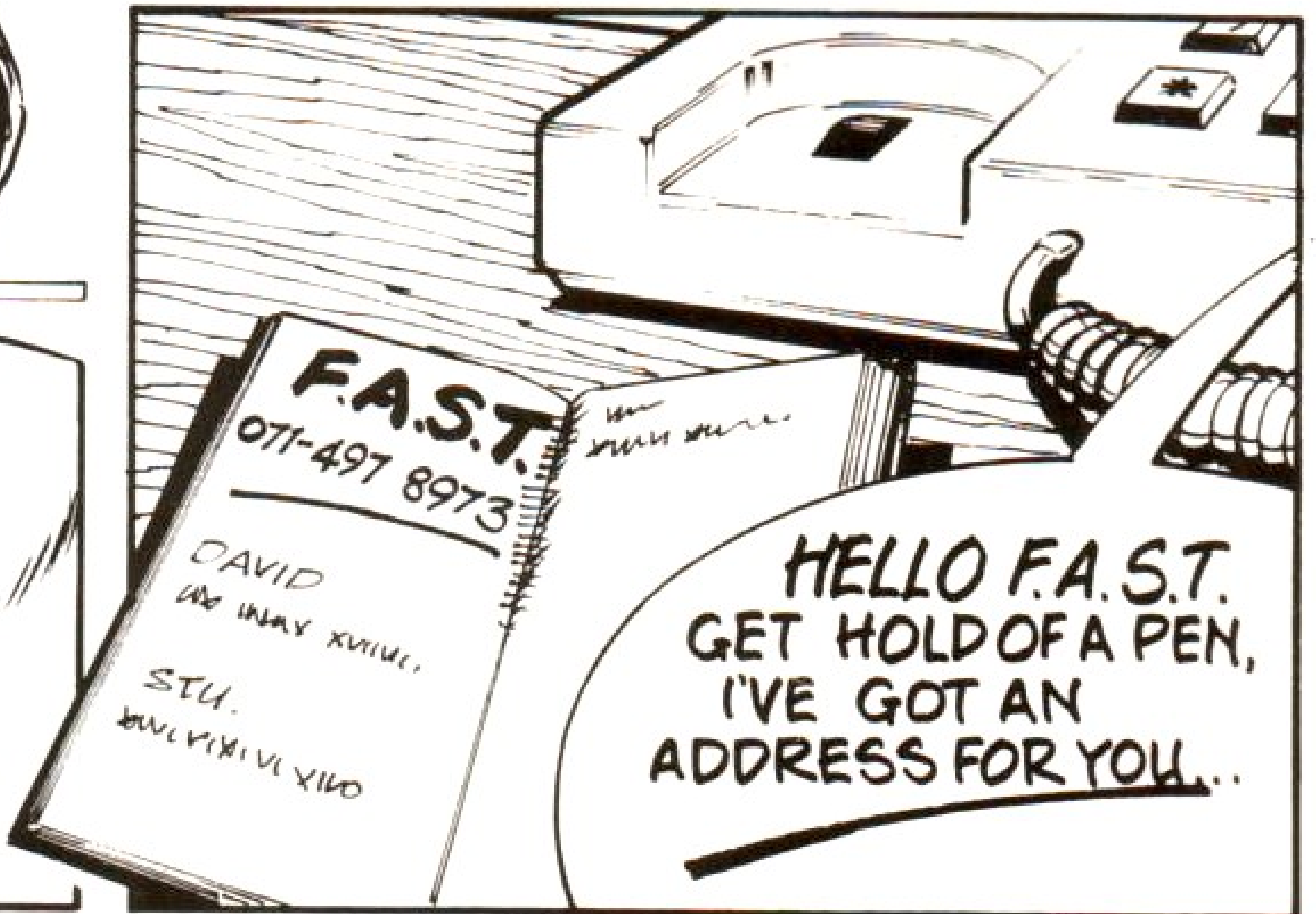










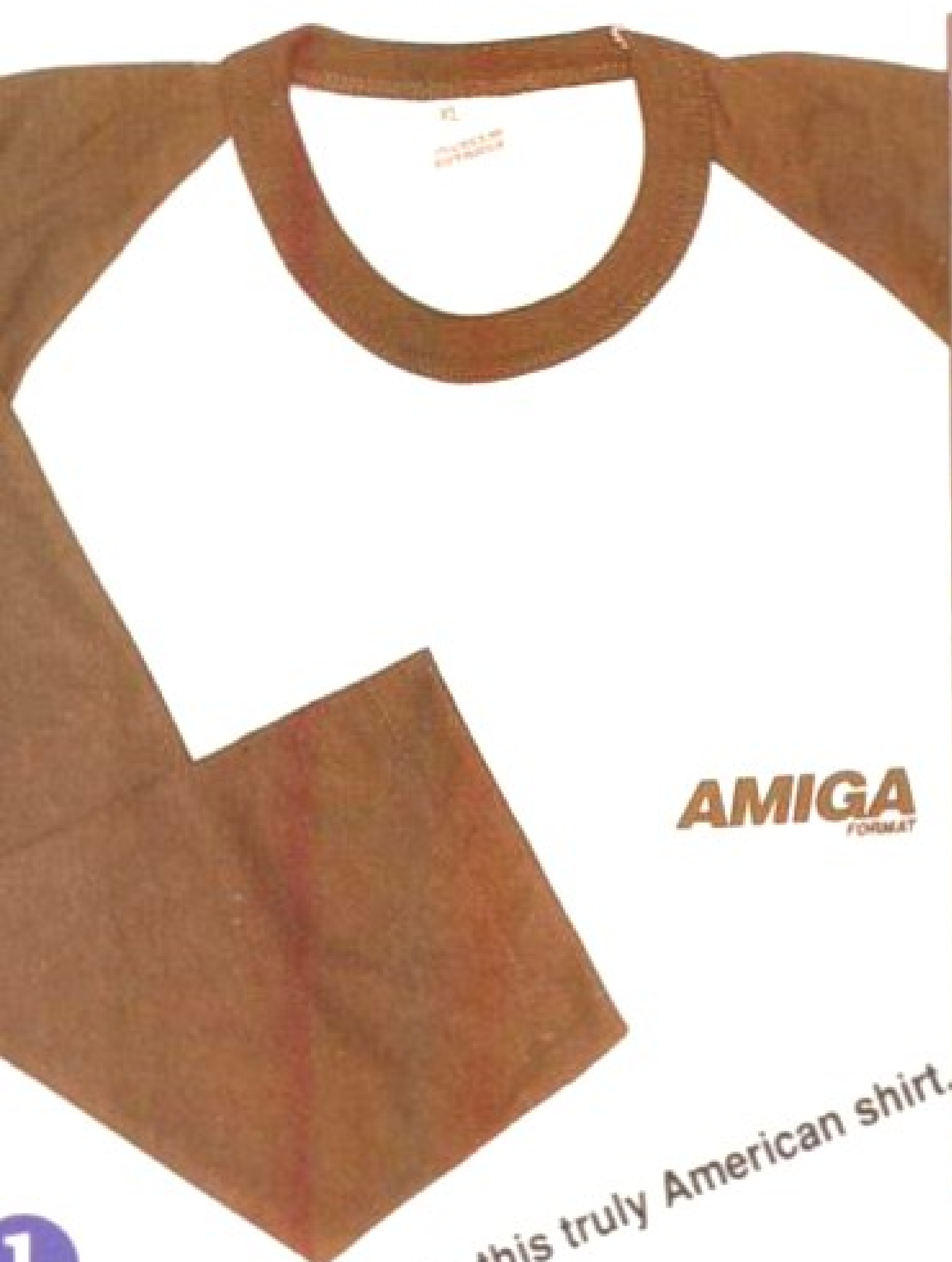




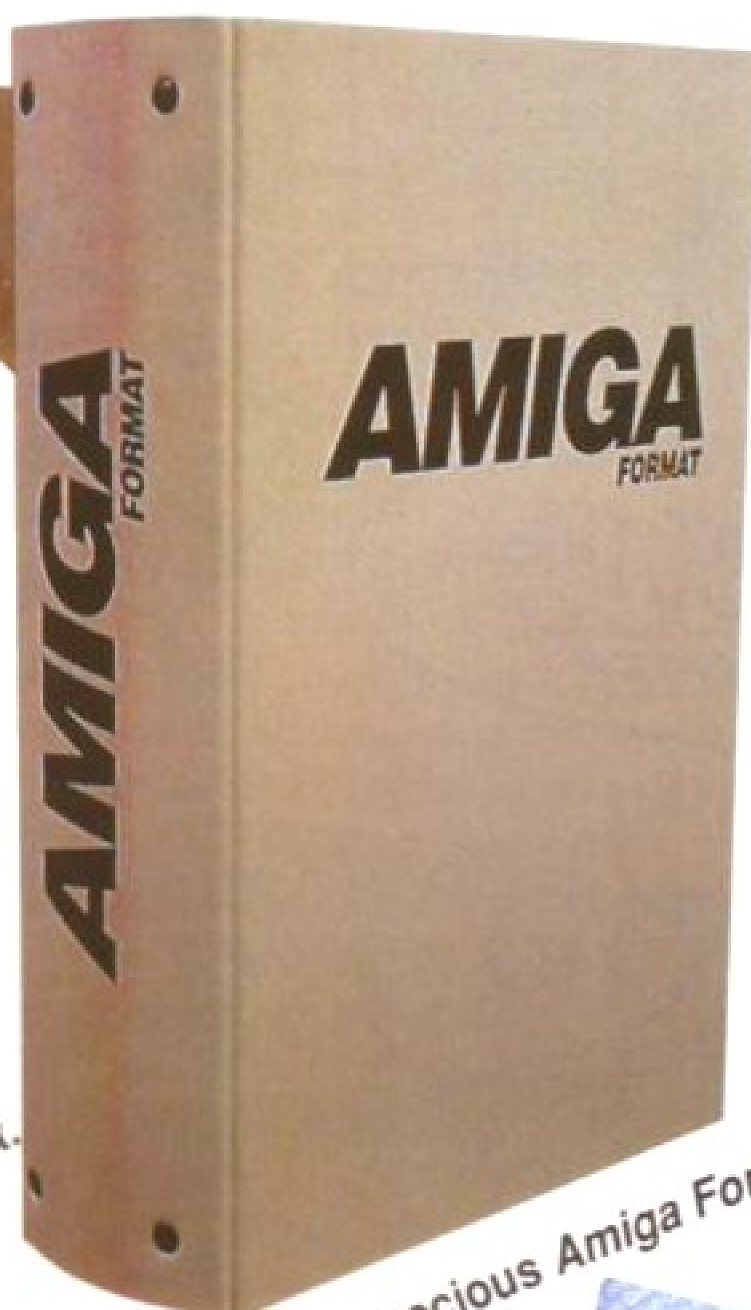
PIRACY IS THEFT

AMIGA FORMAT MAIL

THE LATEST AND GREATEST PRODUCTS AT THE BEST POSSIBLE PRICES!



1 Gain some credibility in this truly American shirt.



2 Keep your vulnerable, precious Amiga Formats safe.



3 Take to the skies!

FOUR great games in O

Protect your software



8 Program in 68000 NOW!



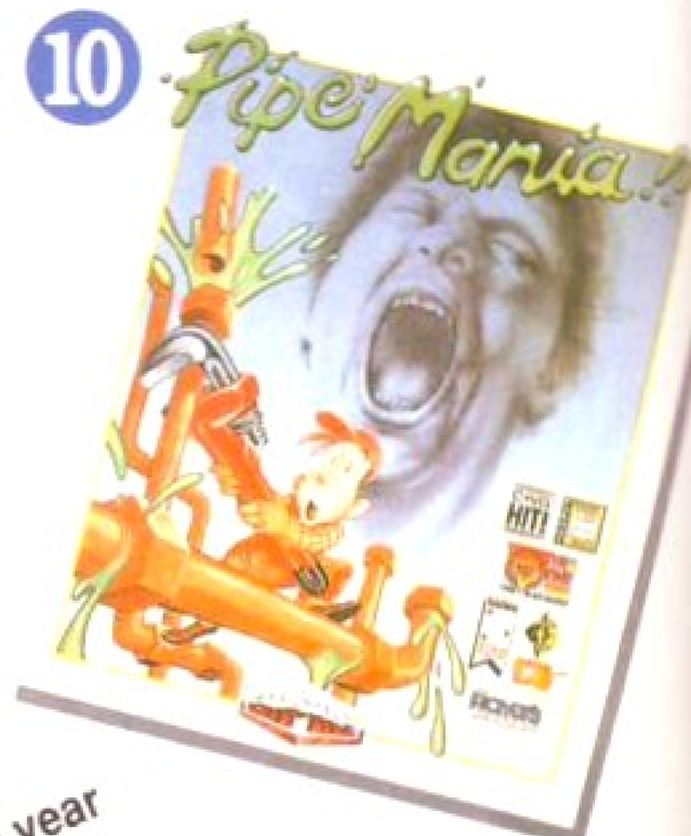
6 A brilliant Coverdisk win



7 Create your own sounds.



9 The escape for Dan Dare.

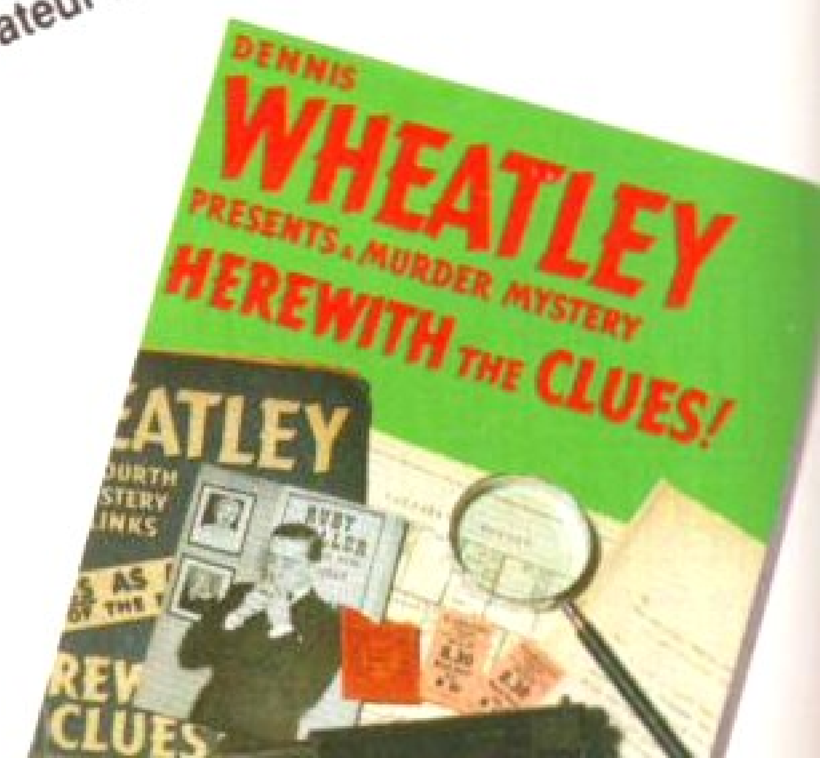


10



11 The most addictive coin - op of the year

12 An amateur Detectives Treat.



HOTLINE 0485 74011

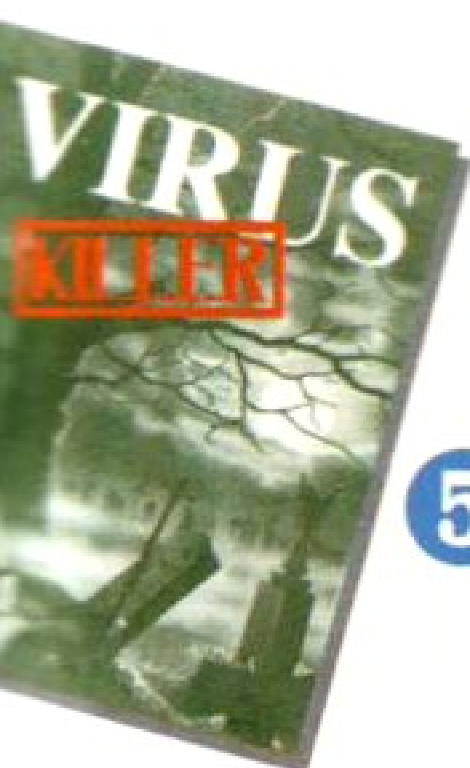
HOW TO ORDER... JUST MAKE A NOTE OF THE PRODUCT NAME AND ORDER NUMBER AND FILL IN THE ORDER FORM OPPOSITE OR RING OUR HOTLINE NUMBER ON 0458 74011

PRICES INCLUDE POSTAGE, PACKING AND VAT

NO HIDDEN EXTRAS

ORDER

Virus Killer.

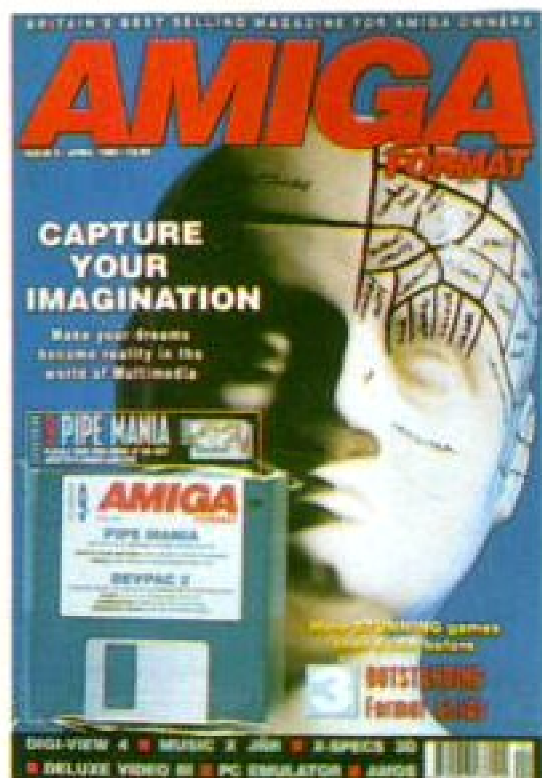


5



Get yourself round these pipes!

SUBSCRIPTION



FOR ONLY£29.95 YOU CAN RECIEVE 12 ISSUES OF *AMIGA FORMAT*, DELIVERED TO YOUR DOOR. DO NOT RUN THE RISK OF THE NEWSAGENT SELLING OUT! SEE PAGE 91 FOR FURTHER DETAILS OR CALL THE HOTLINE NUMBER ON 0458 74011 ORDER CODE AM100

BACK ISSUES



Want to complete your collection of the ultimate Amiga magazine? Back issues come complete with disks, prices include the postage and packing!

AMIGA FORMAT

ISSUE	PRICE	ORDER NO
ISSUES 1 - 4	SOLD OUT	SORRY!
ISSUE 5	£3.45	AMF05
ISSUE 6	£3.45	AMF06
ISSUE 7	£3.45	AMF07
ISSUE 8	£3.45	AMF08
ISSUE 9	£3.45	AMF09
ISSUE 10	£3.45	AMF10
ISSUE 11	£3.45	AMF11



Or why not grab copies of the very rare original *ST/Amiga Format*? Hurry, there are limited stocks!

ST/AMIGA FORMAT

ISSUE	PRICE	ORDER NO
ISSUE 1-10	SOLD OUT	SORRY!
ISSUE 11	£3.45	AM211
ISSUE 12	£3.45	AM212
ISSUE 13	£3.45	AM213

1 BASEBALL SHIRT

Designed in the USA, this black and white shirt is a must for every Amiga owner Logo on left breast and centre back)

Description	Price	Order No
Medium	£6.50	AM106
Extra Large	£6.50	AM107

2 AMIGA BINDER

Keep your issues together in this high quality binder with the *Amiga Format* logo printed on the front and spine.

Description	Price	Order No
One binder	£4.95	AM108
Two binders	£9.00	AM109

3 F29 RETALIATOR Ocean

Take to the skies in the Amiga Format Gold winner. Superb 3D graphics and lasting appeal in this combat/flight simulaton.

SAVE £7

Description	Price	Order No
F-29 Retaliator	£17.95	AM163

4 MAGNUM 4 Ocean

A **FOUR**-game compilation conssiting of *Double Dragon, Batman – The Caped Crusader, Afterburner* and *Operation Wolf*.

SAVE £8

Description	Price	Order No
Magnum 4	£21.99	AM155

5 VIRUS KILLER CRL

Be sure your machine, disks and programs are safe. Detect and destroy the viruses leaving your software safe.

PROTECT YOUR FILES

Description	Price	Order No
Virus Killer	£9.95	AM161

6 RESOLUTION 101 Millennium

Since the passing of Resolution 101, no criminal is safe. Your objective is to drive around town and pick up these guys before they pick you off. A brilliant, super-fast, exciting game with amazing graphics.

SAVE £6

Description	Price	Order No
Resolution 101	£18.99	AM166

7 QUARTET Microdeal

See Coverdisk 12, then buy this package to create your own music.
'A music package with a difference' **AF**

SAVE £12

Description	Price	Order No
Quartet	£37.95	AM165

8 DEVPAC 2 HiSoft

Program directly in 68000 assembler language. See the Coverdisk demo then buy the product at this remarkable price.

SAVE £15

Description	Price	Order No
Devpac	£44.95	AM157

9 DAN DARE III Virgin

Taken from the blockbuster movie; see our fabulous game demo on Coverdisk, Issue 12. Playing the part of the hero, be sure to conquer the evil Mekon and his Treens.

SAVE £5

Description	Price	Order No
Dan Dare III	£14.99	AM164

10 PIPE MANIA Ent. Int.

See the demo on Issue 9. This superb pipe game will have you hooked for ages!

SAVE £7

Description	Price	Order No
Pipe Mania	£12.99	AM158

11 RAINBOW ISLANDS Ocean

Paint your world with a rainbow. This brilliant, fun, unusual, addictive game will have you hooked for hours. It certainly had the *Amiga Format* team begging for more!

SAVE £7

Description	Price	Order No
Rainbow Islands	£17.95	AM160

12 HEREWITH THE CLUES

CRL • Loads of fun in this murder mystery game. You are the assistant commissioner of the anti-terrorist squad in pre-war London. Play the game, then enter the CRL competition to reveal the solution. *'A great mystery to solve, well done, CRL!'* **AF**

SAVE £7

Description	Price	Order No
Herewith...	£17.95	AM162

AMIGA FORMAT MAIL ORDER

Name

Address

Postcode

Phone number

Description	Price	Order No

Method of payment (please circle) Access • Visa • Cheque • PO

TOTAL ORDER

● For overseas orders call Trevor for prices on 0458 74011

Credit Card No

Expiry date

Please make all cheques payable to Future Publishing Limited

SEND THIS FORM TO: Amiga Format, Future Publishing Ltd, Freepost, Somerton, Somerset, TA11 7BR

No stamp required if posted in the UK, Channel Islands or the Isle of Man

• *Nebulus*
• *Faery Tale Adventures* (I seem to have got out of sync with this game, cos he always gets tired when he's miles from anywhere, but when he finally gets to an inn to sleep he's in the middle of the day!) and
• *Daily Double Horse Racing*

I also play occasionally on *Ferrari F1, Thundercats* and *Games Winter Edition.* I am very impressed with the Coverdisk material – will we have more of the *Pontoon/Connect 4* type of thing in the future?

I really love playing about with *MED,* programs with which you can customize Icons, and *Picpuz* – to name only a few. I think it's a good idea to have game demos as well – after seeing the *Xenon 2* demo my brother went straight out and bought it, but other games we might have considered proved to be not what we thought when we played the demo.

Dragon's Breath looked interesting – how cute to hatch dragons! – but on reading the review you have to become a tyrant in order to get anywhere (we've still bought it though). Other games I've been looking out for are *Never Mind, Rainbow Islands, Pinball Magic* and *Infection,* reviewed last year by *AF* – any further news on what's happened to it? I would be very interested in a game in which you could run a stable, perhaps for racing or three-day eventing. I would like to be able to chose when to buy horses, what to feed them on, their training and management routines, and have a choice of different types of grooms to look after and ride them.

I would imagine it would be along the lines of the Football Management type game, with action sequences where you can either watch or control your horse. The horses could be entered in famous races like the Grand National or the Derby, or perhaps Badminton or the Olympics for eventing. There would have to be good graphics, unlike in *Daily Double* where the backgrounds are very jerky and the horses are small.

I would also like to see adventure games with really good graphics whereby you DON'T have to lie, cheat, steal or fight all the time. When I see the ads in the magazine for games like *Blood Money* or *Stryx* I always wonder where the various monsters got their "clothes" from.

There must be other females out there using Amigas for various things – do they really not bother to write in? Why don't they write in and SAY what sort of software they want to see instead of just complaining? I would not like to have a "Woman's Page" or anything like that – I always read the whole mag from cover to cover as I find it fascinating how computers have improved over the years, and I like the way you have such a wide range of subjects.

Sara Maidstone
Norwich



Exactly half of our readers own a RAM expansion. More spooky facts in 'Wasted Hardware'.

We never intend to aim the magazine more at one sex than at any other, but we welcome female readers and wish that the computing industry was not so male-dominated. Glad to know you don't want a Women's page – it seems a bit silly, almost like saying that women shouldn't be interested in the rest of the mag. Oh, and as for Infection *– we're told it is subject to some kind of legal deal or wrangle which has delayed its release. More news as soon as anything happens...*

Wasted Hardware

Thousands of us have invested in second drives and half meg expansions, yet many programmers are ignoring any extra hardware.

There can be little excuse not to bung as much code as possible into memory on booting up. Disk accessing kills a game, and disk swapping is a chore when it is unnecessary.

Super Hang On shows how to intelligently load all the data in one go to minimise hassle.

Nick Barham
Wembley, Middlesex

Well our reader survey shows that 56% have a second drive and 50% have a memory upgrade, and that 38% intend to buy a memory upgrade and 30% a second drive. Now if that isn't a persuasive argument for the software houses catering for two drives and 1 meg memories, I don't know what is. All software should at least take this into account to eliminate as much disk accessing and swapping as possible.

Where's Digi-FX?

Quite some time ago, I read in an interview with NewTek that they had a very interesting piece of software in the works.

It was to be called Digi-FX, and was supposed to be a very advanced HAM picture compressor and manipulation program. This article appeared over a year ago, and I wondered if perhaps you knew what happened to it?

Paul Murgatroyd
Bradford, West Yorkshire

Digi-FX does not exist as yet, but if you want to find out what NewTek are up to this very minute, you could give them a ring in the USA on 0101 913 354 1146.

Get Protected!

Nigel Stockley (Letters, May 1990) is correct, I'm sure, in maintaining that new and better techniques of disk protection simply increase the enthusiasm of the cracking crews for their piratical work (while making life harder for the rest of us since the products fall over more often as a result.) If they didn't have a challenge, they would stop right? But password protection is no solution – the cracking crews can still have fun knocking that out, either by finding a way of bypassing it altogether or by rigging it so that a <return> will satisfy the protection routine.

So supposing we take out all protection? I don't think they would go away yet, since they would still get kudos (amongst themselves) by distributing products before they were available in the shops (by filching review copies, etc.). Who can be first to pass a copy of *Damocles?* – that sort of challenge. But that could be stopped if software houses stopped this ridiculous practice of announcing new games months or even years before they are ready. It does them no good.

At present, a game may get rave reviews, but when it finally appears in the shops three months later, everyone has forgotten about it and sales suffer as a result. Any retailer will tell you this. Notice the different attitude in the States – the tendency there is to have non-protected software so that you can mount it onto your hard disk. Too many British software houses seem to be more interested in making life tough for ordinary users than producing a finished product. And would someone tell me what is the point of putting both disk protection and password protection on the same product? If either is effective the other is redundant; if either is redundant, there's no point in having it there! The poor user who has paid for the thing gets hassled both ways.

The only real way to tackle computer piracy is by education. The present publicity campaign by FAST is excellent. When people feel like criminals for accepting a copy of a friend's game, that is when the problem will go away.

Roger Musson
Edinburgh

Hear, hear! we are entirely in support of FAST's campaign, and you may be lucky enough to spot their advertising in this issue of Amiga Format. But, as you say, the problem will only go away when people stop thinking it's OK for them to copy and use stolen software.

Free Help for Artists

I am a budding young artist and I direct my talent through my Amiga with the aid of *Deluxe Paint III.* My offer is to help out any Amiga user out there who is stuck for quality IFF pictures to incorporate in their games etc. FREE! Yep, absolutely free! What's the catch? I hear you cry...well, no catch except you send me a 3.5 inch with a SAE (some catch, about £1.00 in all with guaranteed return!) with a description of what you require. I can also guarantee all disks returned within a reasonable period depending on your order. If you don't like what you get (which is extremely unlikely) then it doesn't cost you a penny, but if you do like it (and you can send me some donations if you like) I'll be pleased to be your contact for use in the future.

M McManus
Radcliffe, Manchester

A very noble and generous offer it seems, too. A much more promising career than wrestling offered.

Guru's Meditations

If this page were on fire nobody would urinate on it!

GURU
'A New Image For The Nineties'

Well, we're coming clean at last. We have to admit – as you may have noticed last month – that this page is consistently the least popular in the whole magazine. Now obviously that comes as no great surprise – it is, after all, just one crummy little black-and-white page tucked away at the back of the mag, so it can't be expected to compete with full-colour glossy exciting pages further forwards in the mag. But, in a radical marketing excercise, we intend to raise the profile of the Guru.

And there is one other problem. When the new version of Workbench – not 1.4 but actually Version 2 – finally appears, it is believed that the Guru will finally have disappeared from the Amiga. No more of those glorious hippyisms dreamt up in the Haight-Astbury district of rad California way back in the swinging sixties when the Amiga was first invented *(Are you sure about that? – Ed)*. So maybe it will be time for the Guru to disappear from these pages once and for all.

The Plan of Campaign

Now, the Conservative Party would employ Saatchi and Saatchi to organise their new image – at a cost of slightly less than £400,000 – and come up with something crappy like a red, white and blue ice cream cone and the slogan "Christ, we want to stay in government". A major international company like ICI is quite happy to pay slightly more than the sum total of all third world debts to have their logo redesigned and doesn't even complain when it's not redesigned, just made slightly curlier. This is the kind of thing that made Britain great.

Now obviously, this is exactly what we plan to do for Guru. Only being great advocates of the free market economy, we're not planning to employ a major advertising agency. Instead, we're offering the chance to our readers. We believe that competition encourages excellence, so we're going to run a competition. You can also tender for the contract to empty our bins, if you happen to feel like it.

The fee is a slightly reduced rate – rather than the going rate of £250,000, we're offering three Tunnock's Caramel Wafers ("Five million made and sold every day"), an only slightly used BT Phonecard, and free issues of *Amiga Format*, posted to you personally by the Deputy Editor, for the next three months. Wow!

All you have to do to win this fabulous prize is to send us your idea for what we should do with this, the last page of the magazine. The best idea wins the prize. And probably – although we can't absolutely promise this, because all the ideas might be appalling – you'll see the idea become reality.

All entries should be posted to "Guru – The Kraft durch Frieden competition" at our usual address, 30 Monmouth Street, Bath, BA1 1EJ, to arrive by the closing date of July 9th. Do it now!

NEXT MONTH

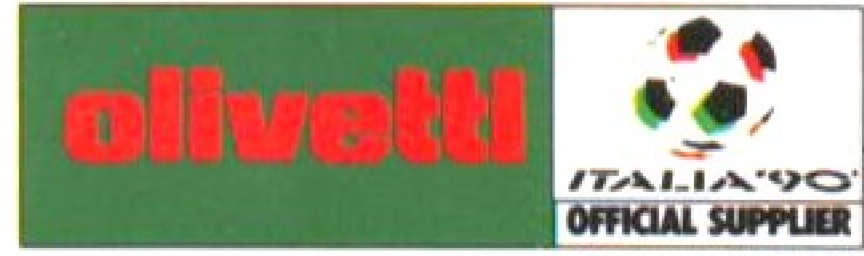
Next month's issue of *Amiga Format* is a bit of a special time for us, because it will be exactly a year since the first ever issue of *Amiga Format* hit the streets. There's something to celebrate!

So, the First Birthday edition of *Amiga Format* is going to be a big one for everyone. Expect such up-to-the minute reviews as *Professional Draw 2*, the long-awaited games programming package *AMOS*, a brand-new games music utility, possibly a special preview of Gold Disk's multimedia package *Showmaker*, and music program *Tiger Cub*. The Screenplay section will, as usual, be crammed full of the latest games – such as *Klax* and *Projectyle*. The main feature will take you to the wonderful world of the movies and a special feature will check out which of the many programming languages is the best one for you.

Remember, *Amiga Format* Issue 13 appears on the newsagent's shelves on or before July 12th and is in a special numbered limited edition (each copy has the same number – 13) of about 80,000. This is a collector's item, worth far more than the measly cover price of £2.95.

ADVERTISERS' INDEX





WORLD CUP SOCCER ITALIA 90 THE ONLY OFFICIAL WORLD CUP COMPUTER GAME FOR THE 1990 CHAMPIONSHIP

ACCEPT NO SUBSTITUTE

AVAILABLE ON:

IBM PC
AMIGA .1 MEG
AMIGA .½ MEG
ATARI ST
CBM 64 CASS
CBM 64 DISC
SPECTRUM 48/128
SPECTRUM +3
AMSTRAD CASS
AMSTRAD DISC

PACK CONTENTS:

Free World Cup wall chart

Plus

World Cup Story 1930-1990

Plus

Amazing facts & figures from all championships

Plus

Competition to win:-
weeks at the Bobby Charlton School of Football (to be coached by 1st Division Footballers). Plus a Football Strip of your own choice.
Videos of the 1990 World Cup Championship.
Footballs.
T-Shirts.



IBM

ATARI ST

AMIGA









Licensed by OLIVETTI official supplier ITALIA '90'.

Available from W.H. Smiths, Menzies, Boots, Woolworths your local VIRGIN store and all leading software retailers.

DIGI·VIEW GOLD

4096 Colours in High Resolution... is just the beginning

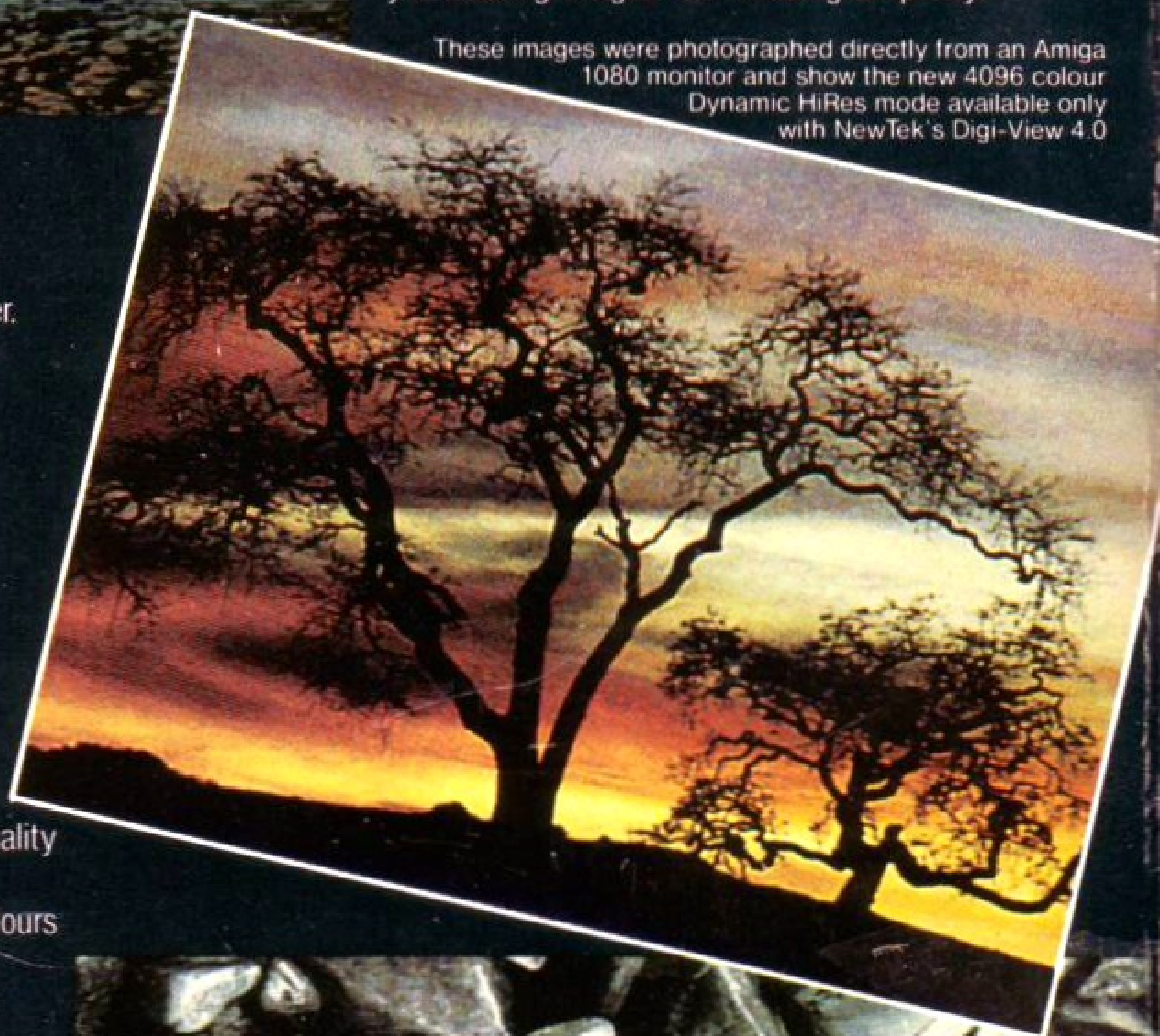




ith the all new Digi-View 4.0 software you can do the one thing most people thought was impossible—digitize and display all 4096 colours in high resolution! We call this revolutionary new graphics mode Dynamic HiRes. Amiga Format magazine calls it "breathtaking, easily the best images ever seen on an Amiga screen." But that's just the start of what makes Digi-View 4.0 a breakthrough. Other new features include: Dynamic HAM (fringe free HAM), Noise Reduction (for the sharpest images ever), ARexx support, super bitmap digitizing, 24 bit colour support and dozens of other new features making Digi-View Gold the hottest Amiga graphics product ever.

And it's still just as easy to use. Simply focus your video camera on any object or picture, and in seconds Digi-View Gold turns it into Amiga graphics that glow with vibrant colour and stunning clarity. Whether you are creating graphics for desktop publishing, presentations, video, or just for fun, Digi-View Gold gives you dazzling images with amazing simplicity.

These images were photographed directly from an Amiga 1080 monitor and show the new 4096 colour Dynamic HiRes mode available only with NewTek's Digi-View 4.0



Digi-View 4.0 and Digi-Paint 3 Become One with the ultimate link between digitizer and paint program. With Digi-View 4.0's Digi-Port feature they can both share the same screen so that touching-up your digitized images is easier than ever. Transfer 768 x 592, 4096 colour super bitmaps from Digi-View 4.0 to Digi-Paint 3 with a simple menu command, make changes such as combining images or adding titles, and redisplay them as Dynamic HiRes or other resolution images.

Only Digi-View Gold:

- Digitizes in all Amiga resolution modes from 320 x 256 up to 768 x 592 (full HiRes overscan)
- Includes powerful Digi-Paint 1 software for retouching digitized images or creating original artwork
- Uses 2 to 4096 colours (including halfbrite)
- Has exclusive Dynamic modes for 4096 colours in HiRes
- Digitizes in 21 bits per pixel (2.1 million colours) for the highest quality images possible
- Has advanced dithering routines that give an apparent 100,000 colours on screen simultaneously
- Has a special line art mode for desktop publishing
- Comes with an icon driven slideshow program for presentations using both IFF and Dynamic images
- Has complete software control of colour saturation, brightness, sharpness, hue, resolution, and palette
- Digitizes in full overscan with no borders for use with video genlocks
- Offers an unprecedented lifetime warranty

If you want the best graphics possible for your Amiga, then get the best selling video digitizer of all time: Digi-View Gold.

Only £149.95 Inc. VAT

For a NewTek authorized dealer near you contact HB Marketing, Ltd. at 0753 686000

Now includes Digi-Paint 1

NEWTEK
INCORPORATED

*Requires standard gender changer for use with Amiga 1000. Dynamic HiRes requires 2 megs of RAM. Digi-View Gold is a trademark of NewTek, Inc.

